COUNTY PINAL AREA PICACHO BASIN LEASE NO. STATE 08-108702

WELL NAME EL PASO NATURAL GAS COMPANY 1-11 STATE

LOCATION SW NE SEC 11 TWP 7S RANGE 8E FOOTAGE 1980' FNL & 1980' FEL

ELEV 1507' GR _____ KB SPUD DATE 8-14-2005 STATUS Strat PA COMP. DATE 9-3-05 TOTAL DEPTH 3170'

CONTRACTOR

CASING IZE	DEPTH	CEMENT	LINER SIZE & DEPTH

DRILLED BY ROTARY _____

DRILLED BY CABLE TOOL _____

PRODUCTIVE RESERVOIR _____

INITIAL PRODUCTION _____

FORMATION TOPS	DEPTHS	SOURCE L.L.	SOURCE E.L.	REMARKS

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. INTERVALS

SAMPLE LOG _____
SAMPLE DESCRP. _____
SAMPLE NO. _____
CORE ANALYSIS _____
DSTs _____

REMARKS _____

APP. TO PLUG _____
PLUGGING REP. _____
COMP. REPORT _____

WATER WELL ACCEPTED BY _____

BOND CO. LIBERTY MUTUAL INSURANCE COMPANY BOND NO. 23-007-048

BOND AMT. $ 25,000 CANCELLED _____ DATE 3/21/2005

FILING RECEIPT 3131 LOC. PLAT X WELL BOOK X PLAT BOOK X

API NO. 02-021-20006 DATE ISSUED 4/11/2005 ORGANIZATION REPORT YES 2/16/2005

DEDICATION N/A STRAT TEST

PERMIT NUMBER 925

(over)

WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

DESIGNATE TYPE OF COMPLETION

New Well ☐ Temporary Abandon ☐ Work-Over ☐ Deepen ☐ Plug Back ☐ Same Reservoir ☐ Different Reservoir ☐ Oil ☐ Gas ☐ Dry ☒

DESCRIPTION OF WELL AND LEASE

Operator: El Paso Natural Gas Company	Address & Phone No.: 2 North Nevada, Colorado Springs CO 80903 719-520-4533	
Federal, State or Indian Lease Number or name of lessor if fee lease: State	Well Number: 1-11	Field & Reservoir: NA
Location: 1,980' FNL + 1,980' FEL	County: Pinal	
Sec. Township-Range or Block & Survey: Sec 11 - T7S - R8E		

Date spudded	Date total depth reached	Date completed, ready to produce	Elevation (DF, KB, RT or Gr.)	Elevation of casing head flange
8/14/2005	9/3/05	NA	1,507' feet	NA feet

Total depth	P.B.T.D.	Single, dual, or triple completion?	If this is a dual or triple completion furnish separate report for each completion
3,170' MD	NA	NA	

Producing interval(s) for this completion	Rotary tools used (interval)	Cable tools used (interval)
NA	0 - 3,170'	—

Was this well directionally drilled?	Was directional survey made?	Was copy of directional survey filed?	Date filed
No	Yes	Attached	Attached

Type of electric or other logs run (check logs filed with the Commission) — Date filed

Schlumberger - Lithology Density / Compensated Neutron, Laterolog, Gamma 8/22/05 + 9/3/05

Welenco - Dual Induction, Electric, Gamma, Temperature, caliper

CASING RECORD

Casing (report all strings set in well -- conductor, surface, intermediate, producing, etc.)

Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amount pulled
Conductor	12 1/4"	9 5/8"	36#	85'	22	0
Surface	8 3/4"	7"	23#	1797'	310	0

TUBING RECORD

Size in.	Depth set ft.	Packer set at ft.

LINER RECORD

Size in.	Top ft.	Bottom ft.	Sacks cement	Screen (ft.)

PERFORATION RECORD

Number per ft.	Size & type	Depth interval

ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD

Amount & kind of material used	Depth interval

INITIAL PRODUCTION

Date of first production	Producing method (indicate if flowing, gas lift or pumping -- if pumping, show size & type of pump)
NA	

Date of test	Hours tested	Choke size	Oil prod. during test bbls.	Gas prod. during test MCF	Water prod. during test bbls.	Oil gravity *API

Tubing pressure	Casing pressure	Calculated rate of production per 24 hrs.	Oil bbls.	Gas MCF	Water bbls.	Gas - oil ratio

Disposition of gas (state whether vented, used for fuel or sold)

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Manager, Facility Planning of the El Paso Natural Gas Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

9/15/05
Date

Jay W Sittner
Signature

Permit No. 925

Mail completed form to:
Oil and Gas Program Administrator
Arizona Geological Survey
416 W. Congress, #100
Tucson, AZ 85701

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Well Completion or Recompletion Report and Well Log
File One Copy
Form No. 4

10/98

P/N 925

DETAIL OF FORMATIONS PENETRATED

FORMATION	TOP	BOTTOM	DESCRIPTION *
Conglomerate	-	1000'	Coarse grained quartz + mafic igneous conglomerate with clay intervals
Brown claystone	1000'	1,790'	Brown claystone with minor subangular quartz sand
Lt. Brown siltstone	1,790'	2,110'	Light brown siltstone with calcarious cement with quartz sand and/or igneous pebble conglomerate
Buff Limestone with siltstones	2,110'	2,650'	Buff limestone with light brown calcareous siltstone + quartz pebbles
Picacho Salt	2,650'	2,900'	Halite with brown claystone + siltstone intervals
Picacho Anhydrite	2900'	3170'	Milky white quartz + anyhdrite with lt brown calc siltstone + clays

* Show all important zones of porosity, detail of all cores, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

INSTRUCTIONS:

Attach drillers log or other acceptable log of well.
This Well Completion or Recompletion report and well log shall be filed with the Oil and Gas Program Administrator, Arizona Geological Survey, 416 W. Congress #100, Tucson, AZ 85701 not later than thirty days after completion pursuant to A.A.C. R12-7-121.

Form No. 4

PLUGGING RECORD

Operator: El Paso Natural Gas Company	Address & Phone number: 2 North Nevada, Colorado Springs Co 80903 719-520-4533	
Federal, State, or Indian Lease No. or lessor's name if fee lease: State	Well No.: 1-11	Field & Reservoir: NA
Location of Well: 1,980' FNL + 1,980' FEL	Sec - Twp - Rge: Sec 11 - T7S - R8E	County: Pinal
Application to drill this well was filed in name of: El Paso Natural Gas	Has this well ever produced oil or gas? No	Character of well at completion (initial production) Oil (bbls/day) / Gas (MCF/day) / Dry?
Date plugged: September 4+5, 2005	Total depth: 3,170' MB	Amount well producing when plugged: Oil (bbls/day) / Gas (MCF/day) / Water (bbls/day)

Name of each formation containing oil or gas. Indicate which formation open to wellbore at time of plugging	Fluid content of each formation	Depth interval of each formation	Size, kind & depth of plugs used. Indicate zones squeeze cemented, giving amount of cement

CASING RECORD

Size pipe	Put in well (ft.)	Pulled out (ft.)	Left in well (ft.)	Give depth and method of parting casing (shot, etc.)	Packers and shoes
9 5/8"	85'	7'	78'	cut	
7"	1797	7'	1,790'	cut	

Was well filled with heavy drilling mud, according to regulations?

Indicate deepest formation containing fresh water

NAME AND ADDRESSES OF ADJACENT LEASE OPERATORS OR OWNERS OF THE SURFACE

Name	Address	Direction from this well

In addition to other information required on this form, if this well was plugged back for use as a fresh water well, give all pertinent details of plugging operations to base of fresh water sand, perforated interval to fresh water sand, name and address of surface owner, and attach letter from surface owner authorizing completion of this well as a water well and agreeing to assume full liability for any subsequent plugging which might be required.

Use reverse side for additional detail

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Manager, Facility Planning of the El Paso Natural Gas Company (company) and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Date: 9/15/2005

Signature: Joey Settman

Permit No. 925

Mail completed form to:
Oil and Gas Program Administrator
Arizona Geological Survey
416 W. Congress, #100
Tucson, AZ 85701-1315

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Plugging Record
File One Copy

Form No. 10

2/96

Drift-Pac™

925

Wellbore DRIFT Interpretation Package

Prepared Especially For

El Paso Natural Gas

Arizona State #1-11

925

August 22, 2005

This Deviation and Directional Interpretation Package represents our best efforts to provide a correct interpretation. Nevertheless, since all interpretations are opinions based on inferences from electrical or other types of measurements, we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by Customer resulting from any interpretation made by this document. Welenco does not warrant or guarantee the accuracy of the data, specifically including (but without limitations) the accuracy of data transmitted by electronic process, and Welenco will not be responsible for accidental or intentional interception of such data by third parties. Welenco employees are not empowered to change or otherwise modify the attached interpretation. By accepting this Deviation and Directional Interpretation Package, the Customer agrees to the foregoing, and to the General Terms and Conditions of Welenco.

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Drift-Pac

Wellbore Deviation and Directional Interpretation

welenco

Company	El Paso Natural Gas	**County**	Pinal	**State**	AZ
Well Number	Arizona State #1-11	**Date of Survey**	August 22, 2005	**Magnetic Declination Used**	
Field	Eloy, AZ	**Recorded By**	P. Godfrey		
Equipment No.	L-14 **Job Number** 39692	**welenco Office**	Arizona	**Witness**	G. Gettman
Location	Approximately 1 mile east and 1/4 mile south of AZ 87 and Comman Rd, Eloy, AZ				
Remarks	First stage exploration borehole: to be abandon after TD of about 4	**Tool Type**	Compass	**Tool Number**	BGGS3354
Directional Calculation Method	Balanced Tangential Method	**Dogleg Calculation Method**	Lubinski Method		

Measured Information			Closure Calculations				Rectangular Coordinates				Dogleg Severity	
Measured Depth, Feet	Inclination, Degrees From Vertical	Azimuth, Degrees, True	Course Deviation, Feet	True Vertical Depth, Feet	Closure Distance, Feet	Closure Bearing Degrees, True	Latitude, Feet	Departure, Feet	Total Latitude, Feet	Total Departure, Feet	Dogleg Severity, Degs/20 Feet	Dogleg Severity, Degs/100 Feet
20.00	0.23	234	0.17	20.00	0.17	234.50	-0.10	-0.14	-0.10	-0.14		
40.00	0.38	130	0.07	39.99	0.21	216.30	-0.07	0.02	-0.17	-0.12		
60.00	0.30	305	0.02	59.98	0.22	211.60	-0.01	0.01	-0.18	-0.11		
80.00	0.41	294	0.12	79.97	0.25	241.00	0.06	-0.11	-0.12	-0.22		
100.00	0.32	106	0.02	99.96	0.25	245.40	0.01	-0.01	-0.11	-0.23		
120.00	0.42	104	0.13	119.95	0.18	216.30	-0.03	0.12	-0.14	-0.11		
140.00	0.56	99	0.17	139.94	0.18	161.50	-0.03	0.17	-0.17	0.06		
160.00	0.71	106	0.22	159.93	0.35	128.60	-0.05	0.22	-0.22	0.28		
180.00	0.06	105	0.13	179.92	0.48	122.20	-0.04	0.13	-0.26	0.41		
200.00	0.52	94	0.10	199.91	0.58	117.80	-0.01	0.10	-0.27	0.51		
220.00	0.54	97	0.18	219.90	0.75	112.60	-0.02	0.18	-0.29	0.69		
240.00	0.29	88	0.14	239.89	0.89	109.80	-0.01	0.14	-0.30	0.83		
260.00	0.54	93	0.14	259.88	1.02	107.30	0.00	0.14	-0.30	0.97		
280.00	0.95	99	0.26	279.87	1.27	105.10	-0.03	0.26	-0.33	1.23		
300.00	0.82	105	0.31	299.86	1.58	104.40	-0.06	0.30	-0.39	1.53		
320.00	0.78	106	0.28	319.85	1.86	104.50	-0.07	0.27	-0.46	1.80		
340.00	0.63	109	0.25	339.84	2.10	104.70	-0.07	0.24	-0.53	2.04		
360.00	0.70	122	0.23	359.83	2.33	105.60	-0.10	0.21	-0.63	2.25		
380.00	0.78	121	0.26	379.82	2.59	107.20	-0.13	0.22	-0.76	2.47		
400.00	0.93	115	0.30	399.81	2.88	108.20	-0.14	0.26	-0.90	2.73		
420.00	1.05	134	0.34	419.80	3.20	110.00	-0.20	0.28	-1.10	3.01		
440.00	0.99	132	0.36	439.79	3.54	112.30	-0.24	0.26	-1.34	3.27		
460.00	1.13	136	0.37	459.78	3.88	114.30	-0.26	0.26	-1.60	3.53		
480.00	1.03	141	0.38	479.77	4.22	116.50	-0.28	0.25	-1.88	3.78		
500.00	1.06	138	0.36	499.76	4.56	118.20	-0.28	0.24	-2.16	4.02		
520.00	1.12	143	0.38	519.75	4.92	119.90	-0.29	0.24	-2.45	4.26		
540.00	1.06	145	0.38	539.74	5.26	121.60	-0.31	0.22	-2.76	4.48		
560.00	1.16	152	0.39	559.73	5.61	123.40	-0.33	0.20	-3.09	4.68		

TVD in Feet 1,824.10 **Final Closure Distance in Feet** 24.39 **Final Closure Bearing in Degrees** 160.40

Measured Information			Closure Calculations				Rectangular Coordinates				Dogleg Severity	
Measured Depth, Feet	Inclination, Degrees From Vertical	Azimuth, Degrees, True	Course Deviation, Feet	True Vertical Depth, Feet	Closure Distance, Feet	Closure Bearing Degrees, True	Latitude, Feet	Departure, Feet	Total Latitude, Feet	Total Departure, Feet	Dogleg Severity, Degs/20 Feet	Dogleg Severity, Degs/100 Feet
580.00	1.12	153	0.40	579.72	5.96	125.30	-0.35	0.18	-3.44	4.86		
600.00	1.31	155	0.42	599.71	6.33	127.10	-0.38	0.19	-3.82	5.05		
620.00	1.36	154	0.47	619.70	6.75	128.90	-0.42	0.20	-4.24	5.25		
640.00	1.15	156	0.44	639.69	7.15	130.40	-0.40	0.19	-4.64	5.44		
660.00	1.18	154	0.41	659.68	7.52	131.70	-0.37	0.17	-5.01	5.61		
680.00	1.18	151	0.41	679.67	7.91	132.80	-0.37	0.19	-5.38	5.80		
700.00	1.03	163	0.38	699.66	8.26	133.90	-0.35	0.15	-5.73	5.95		
720.00	0.96	162	0.35	719.65	8.57	135.00	-0.33	0.11	-6.06	6.06		
740.00	1.03	160	0.35	739.64	8.88	136.00	-0.33	0.11	-6.39	6.17		
760.00	1.18	157	0.39	759.63	9.24	136.90	-0.36	0.14	-6.75	6.31		
780.00	1.04	157	0.39	779.62	9.61	137.70	-0.36	0.15	-7.11	6.46		
800.00	1.17	159	0.39	799.61	9.97	138.50	-0.36	0.14	-7.47	6.60		
820.00	1.23	160	0.42	819.60	10.36	139.40	-0.39	0.15	-7.86	6.75		
840.00	1.03	158	0.39	839.59	10.73	140.00	-0.37	0.14	-8.23	6.89		
860.00	1.11	158	0.37	859.58	11.09	140.70	-0.35	0.14	-8.58	7.03		
880.00	1.14	161	0.39	879.57	11.46	141.30	-0.37	0.14	-8.95	7.17		
900.00	1.13	157	0.40	899.56	11.85	141.90	-0.37	0.14	-9.32	7.31		
920.00	1.09	160	0.39	919.55	12.22	142.40	-0.36	0.14	-9.68	7.45		
940.00	1.09	166	0.38	939.54	12.57	143.00	-0.36	0.11	-10.04	7.56		
960.00	1.05	159	0.37	959.53	12.92	143.60	-0.36	0.11	-10.40	7.67		
980.00	1.10	166	0.37	979.52	13.28	144.10	-0.36	0.11	-10.76	7.78		
1,000.00	1.11	165	0.39	999.51	13.64	144.70	-0.37	0.10	-11.13	7.88		
1,020.00	0.95	168	0.36	1,019.50	13.97	145.20	-0.35	0.08	-11.48	7.96		
1,040.00	1.02	170	0.34	1,039.49	14.29	145.80	-0.34	0.07	-11.82	8.03		
1,060.00	0.94	168	0.34	1,059.48	14.60	146.30	-0.34	0.06	-12.16	8.09		
1,080.00	1.07	171	0.35	1,079.47	14.93	146.90	-0.34	0.06	-12.50	8.15		
1,100.00	1.17	168	0.39	1,099.46	15.28	147.50	-0.38	0.07	-12.88	8.22		
1,120.00	0.88	163	0.36	1,119.45	15.62	147.90	-0.35	0.09	-13.23	8.31		
1,140.00	0.99	166	0.33	1,139.44	15.94	148.20	-0.31	0.09	-13.54	8.40		
1,160.00	1.04	172	0.35	1,159.43	16.27	148.60	-0.35	0.07	-13.89	8.47		
1,180.00	1.13	168	0.38	1,179.42	16.62	149.10	-0.37	0.07	-14.26	8.54		
1,200.00	1.17	168	0.40	1,199.41	17.00	149.50	-0.39	0.08	-14.65	8.62		
1,220.00	1.10	166	0.40	1,219.40	17.38	149.90	-0.39	0.09	-15.04	8.71		
1,240.00	1.20	168	0.40	1,239.39	17.76	150.30	-0.39	0.09	-15.43	8.80		
1,260.00	1.02	170	0.39	1,259.38	18.13	150.70	-0.38	0.07	-15.81	8.87		
1,280.00	1.15	171	0.38	1,279.37	18.49	151.10	-0.37	0.06	-16.18	8.93		
1,300.00	1.13	175	0.40	1,299.36	18.85	151.60	-0.39	0.05	-16.57	8.98		
1,320.00	1.07	180	0.38	1,319.35	19.19	152.00	-0.38	0.02	-16.95	9.00		
1,340.00	1.12	177	0.38	1,339.34	19.53	152.50	-0.38	0.01	-17.33	9.01		

TVD in Feet 1,824.10 **Final Closure Distance in Feet** 24.39 **Final Closure Bearing in Degrees** 160.40

Measured Information			Closure Calculations				Rectangular Coordinates				Dogleg Severity	
Measured Depth, Feet	Inclination, Degrees From Vertical	Azimuth, Degrees, True	Course Deviation, Feet	True Vertical Depth, Feet	Closure Distance, Feet	Closure Bearing Degrees, True	Latitude, Feet	Departure, Feet	Total Latitude, Feet	Total Departure, Feet	Dogleg Severity, Degs/20 Feet	Dogleg Severity, Degs/100 Feet
1,360.00	1.39	180	0.44	1,359.33	19.93	153.10	-0.44	0.01	-17.77	9.02		
1,380.00	1.19	180	0.45	1,379.32	20.33	153.70	-0.45	0.00	-18.22	9.02		
1,400.00	1.21	181	0.42	1,399.31	20.70	154.20	-0.42	0.00	-18.64	9.02		
1,420.00	1.29	184	0.44	1,419.30	21.09	154.70	-0.44	-0.02	-19.08	9.00		
1,440.00	0.84	183	0.37	1,439.29	21.42	155.20	-0.37	-0.02	-19.45	8.98		
1,460.00	1.11	190	0.34	1,459.28	21.71	155.70	-0.34	-0.04	-19.79	8.94		
1,480.00	0.66	181	0.31	1,479.27	21.98	156.10	-0.31	-0.03	-20.10	8.91		
1,500.00	0.57	181	0.21	1,499.26	22.18	156.30	-0.21	0.00	-20.31	8.91		
1,520.00	0.49	181	0.19	1,519.25	22.35	156.50	-0.18	0.00	-20.49	8.91		
1,540.00	0.57	179	0.18	1,539.24	22.51	156.70	-0.18	0.00	-20.67	8.91		
1,560.00	0.51	179	0.19	1,559.23	22.68	156.90	-0.19	0.00	-20.86	8.91		
1,580.00	0.37	189	0.15	1,579.22	22.82	157.00	-0.15	-0.01	-21.01	8.90		
1,600.00	0.55	201	0.16	1,599.21	22.94	157.30	-0.15	-0.04	-21.16	8.86		
1,620.00	0.72	205	0.22	1,619.20	23.10	157.70	-0.20	-0.09	-21.36	8.77		
1,640.00	0.68	209	0.24	1,639.19	23.25	158.10	-0.22	-0.11	-21.58	8.66		
1,660.00	0.81	203	0.26	1,659.18	23.43	158.60	-0.23	-0.11	-21.81	8.55		
1,680.00	0.84	193	0.29	1,679.17	23.65	159.00	-0.27	-0.09	-22.08	8.46		
1,700.00	0.29	179	0.20	1,699.16	23.81	159.30	-0.19	-0.03	-22.27	8.43		
1,720.00	0.12	208	0.07	1,719.15	23.87	159.30	-0.07	-0.01	-22.34	8.42		
1,740.00	0.58	205	0.12	1,739.14	23.96	159.60	-0.11	-0.05	-22.45	8.37		
1,760.00	0.88	198	0.25	1,759.13	24.15	160.00	-0.24	-0.09	-22.69	8.28		
1,780.00	0.20	188	0.19	1,779.12	24.31	160.20	-0.18	-0.05	-22.87	8.23		
1,800.00	0.27	216	0.08	1,799.11	24.36	160.30	-0.07	-0.03	-22.94	8.20		
1,825.00	0.00	214	0.06	1,824.10	24.39	160.40	-0.05	-0.03	-22.99	8.17		

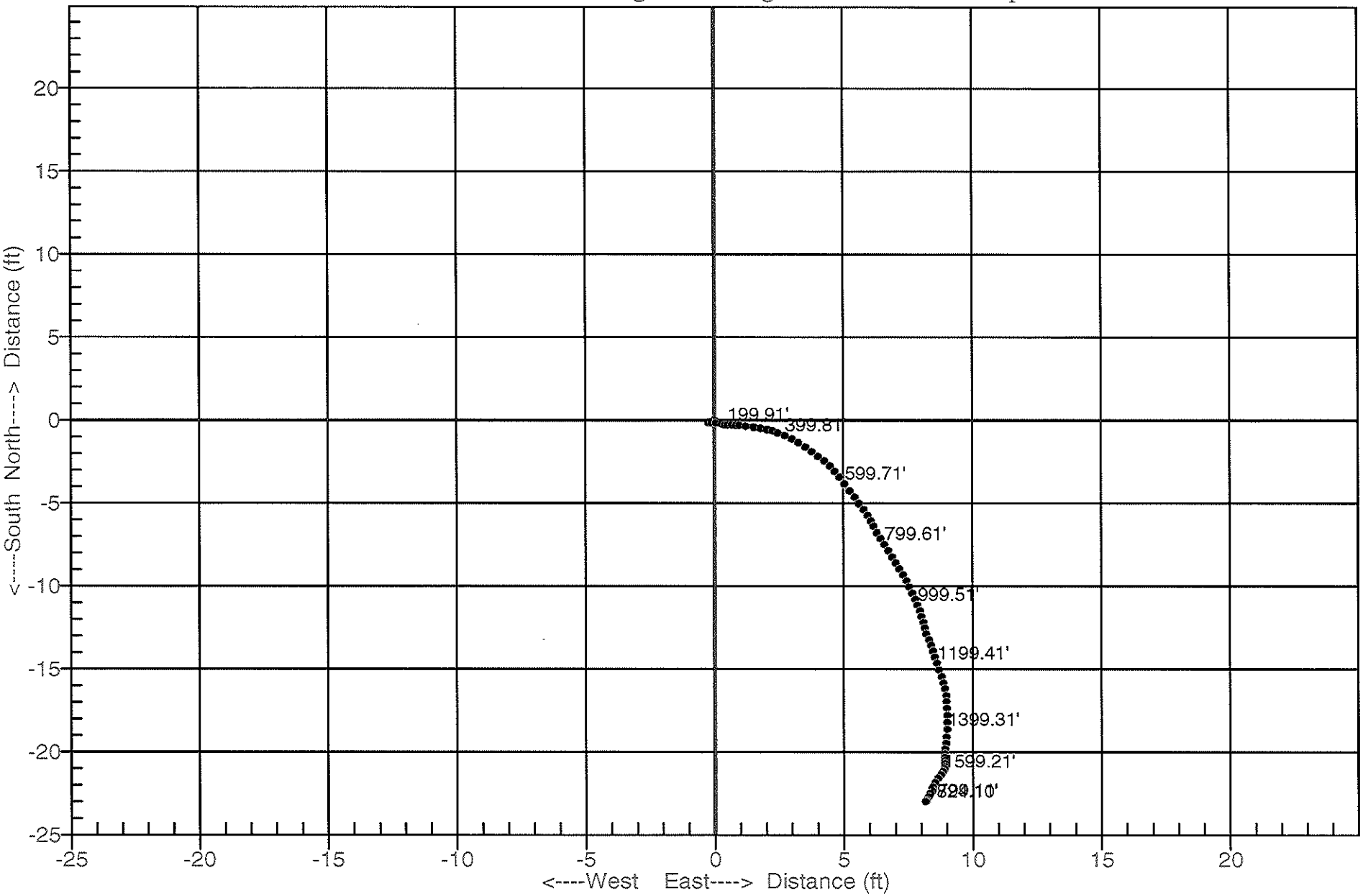
TVD in Feet 1,824.10 **Final Closure Distance in Feet** 24.39 **Final Closure Bearing in Degrees** 160.40

El Paso Natural Gas

Arizona State #1-11

Drift-Pac Plan View

Drift Distance = 24.39 Feet Drift Bearing = 160.4 Degrees True Vertical Depth = 1824.10 Feet



Date of Survey: August 22, 2005

Balanced Tangential Calculation Method

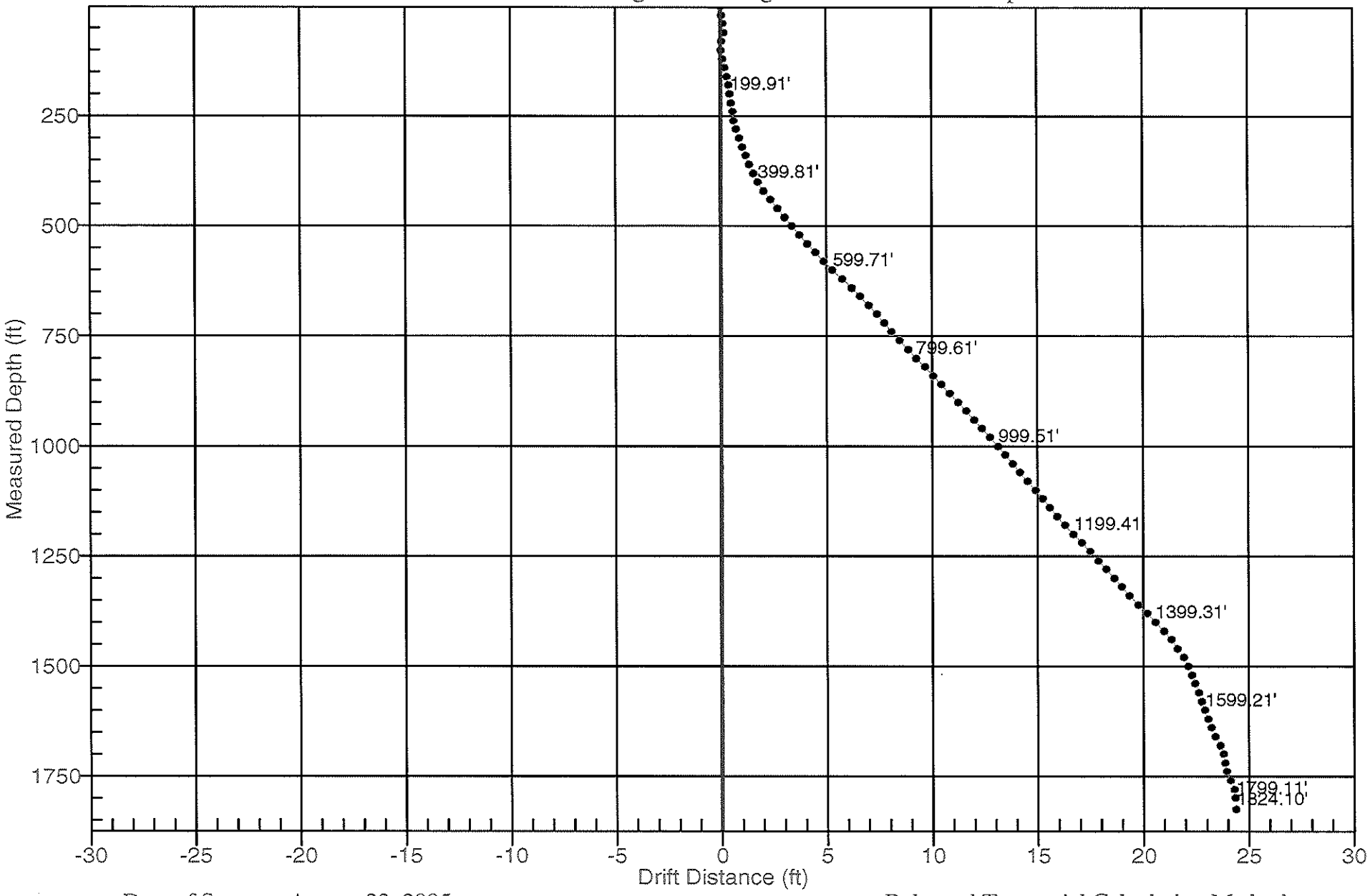
Welenco, Inc. (800) 445-9914

El Paso Natural Gas

Arizona State #1-11

Drift-Pac Plane of Drift View

Drift Distance = 24.39 Feet Drift Bearing = 160.4 Degrees True Vertical Depth = 1824.10 Feet



Date of Survey: August 22, 2005

Balanced Tangential Calculation Method

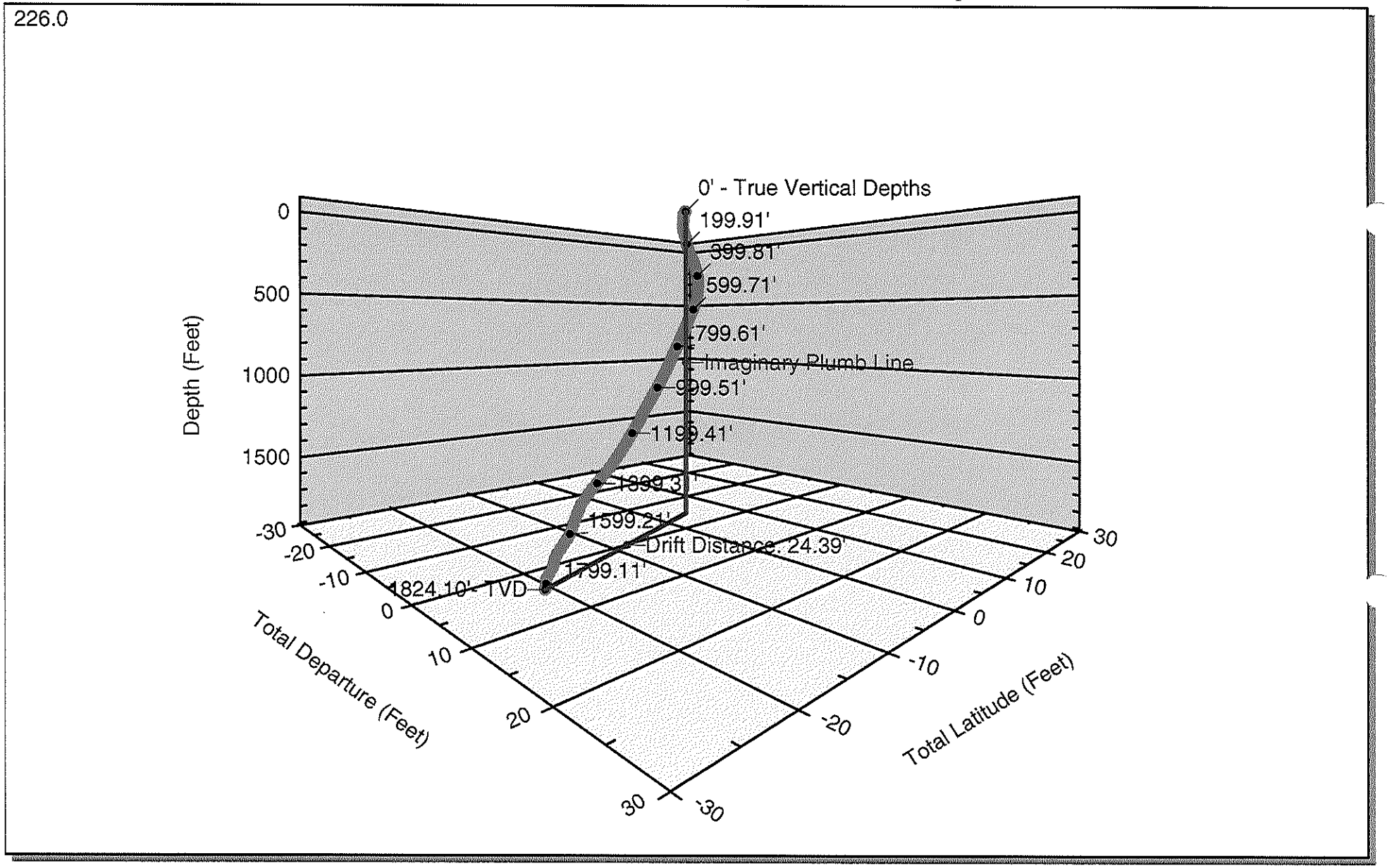
Welenco, Inc. (800) 445-9914

El Paso Natural Gas

Arizona State #1-11

Drift-Pac 3D Projection View

Drift Distance = 24.39 Feet Drift Bearing = 160.4 Degrees True Vertical Depth = 1824.10 Feet



Date of Survey: August 22, 2005

Balanced Tangential Calculation Method

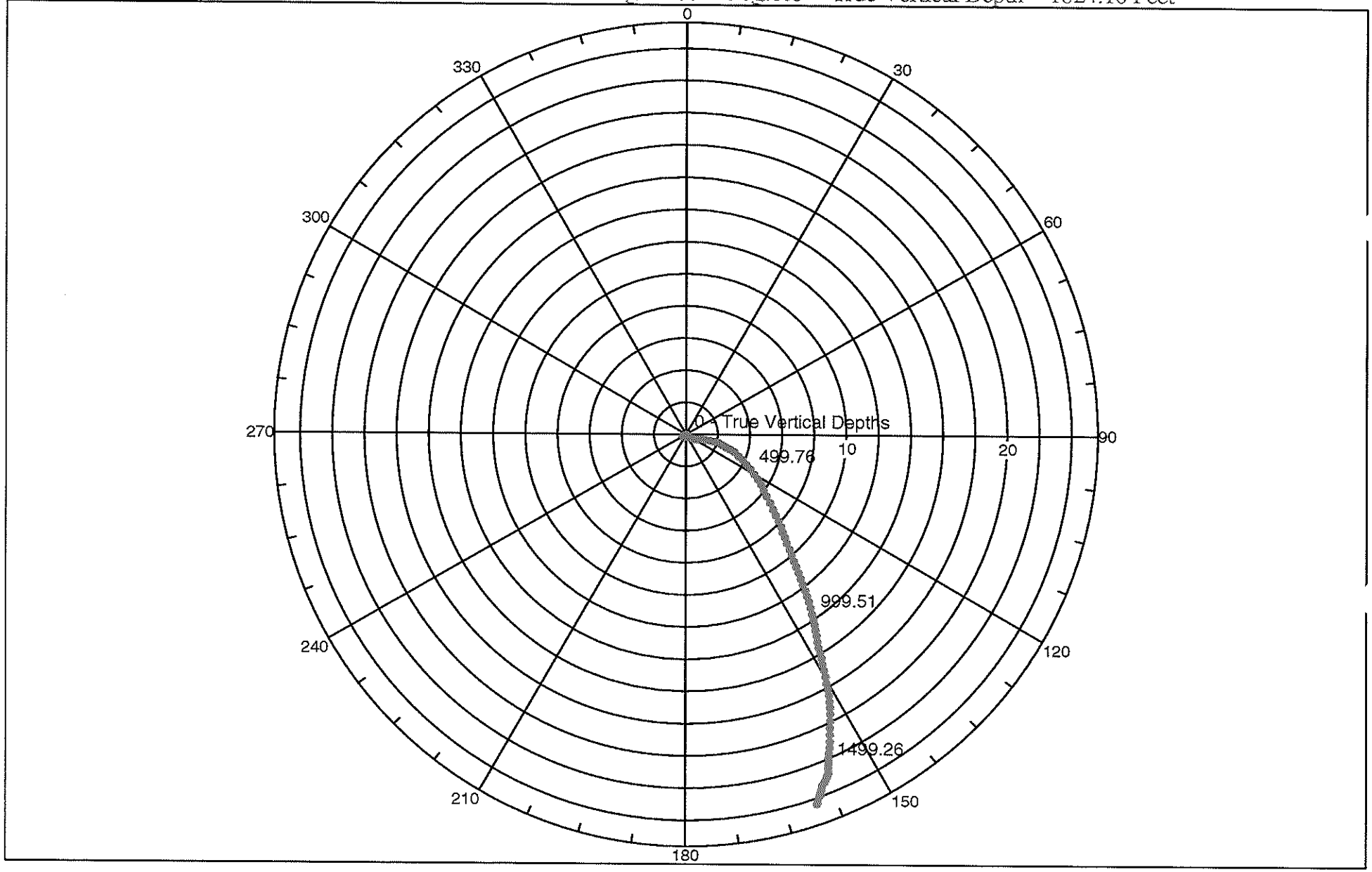
Welenco, Inc. (800) 445-9914

El Paso Natural Gas

Arizona State #1-11

Drift-Pac Polar View

Drift Distance = 24.39 Feet Drift Bearing = 160.4 Degrees True Vertical Depth = 1824.10 Feet



Date of Survey: August 22, 2005

Balanced Tangential Calculation Method

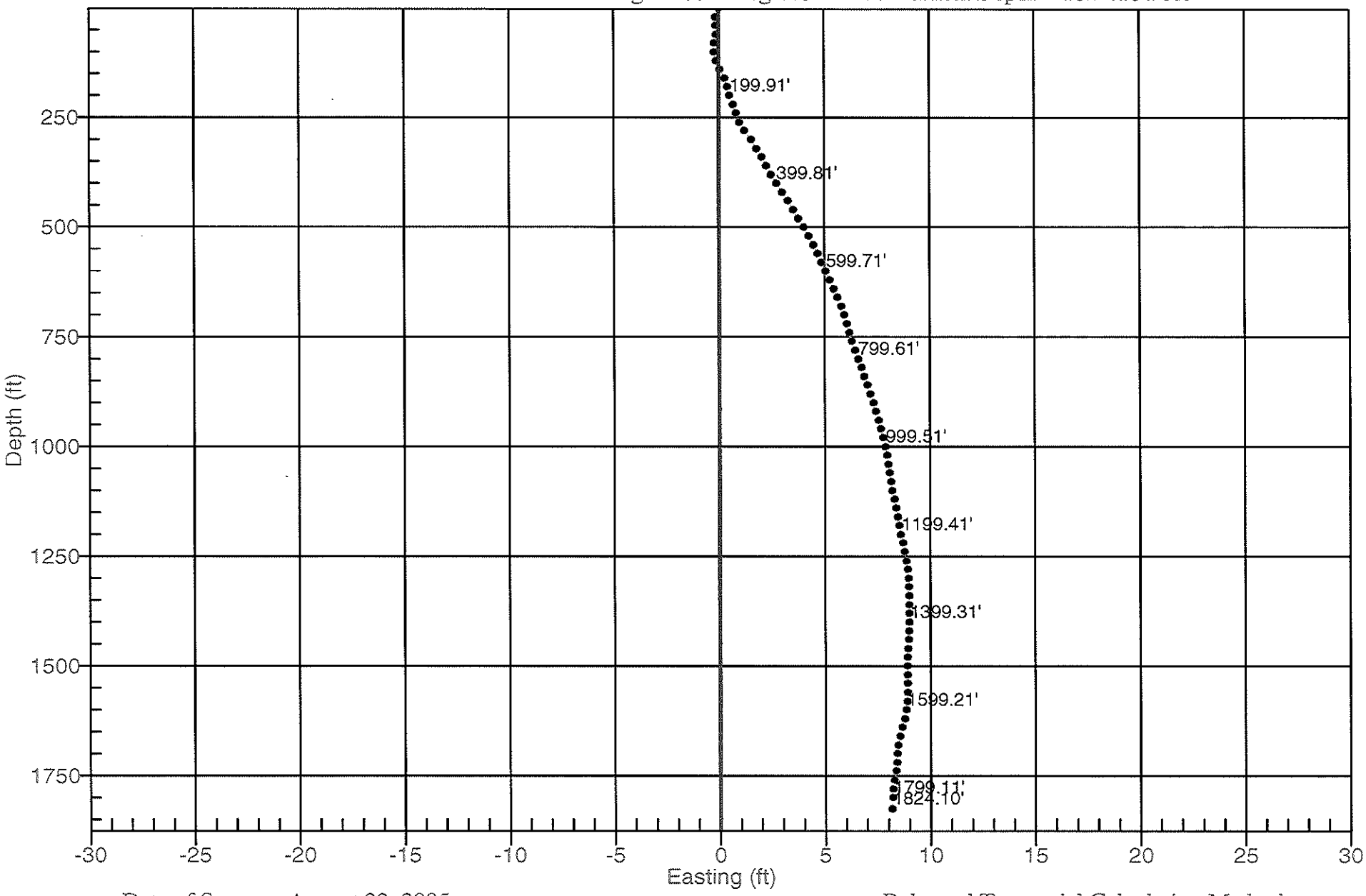
Welenco, Inc. (800) 445-9914

El Paso Natural Gas

Arizona State #1-11

Drift-Pac Easting Rectangular View

Drift Distance = 24.39 Feet Drift Bearing = 160.4 Degrees True Vertical Depth = 1824.10 Feet



Date of Survey: August 22, 2005

Balanced Tangential Calculation Method

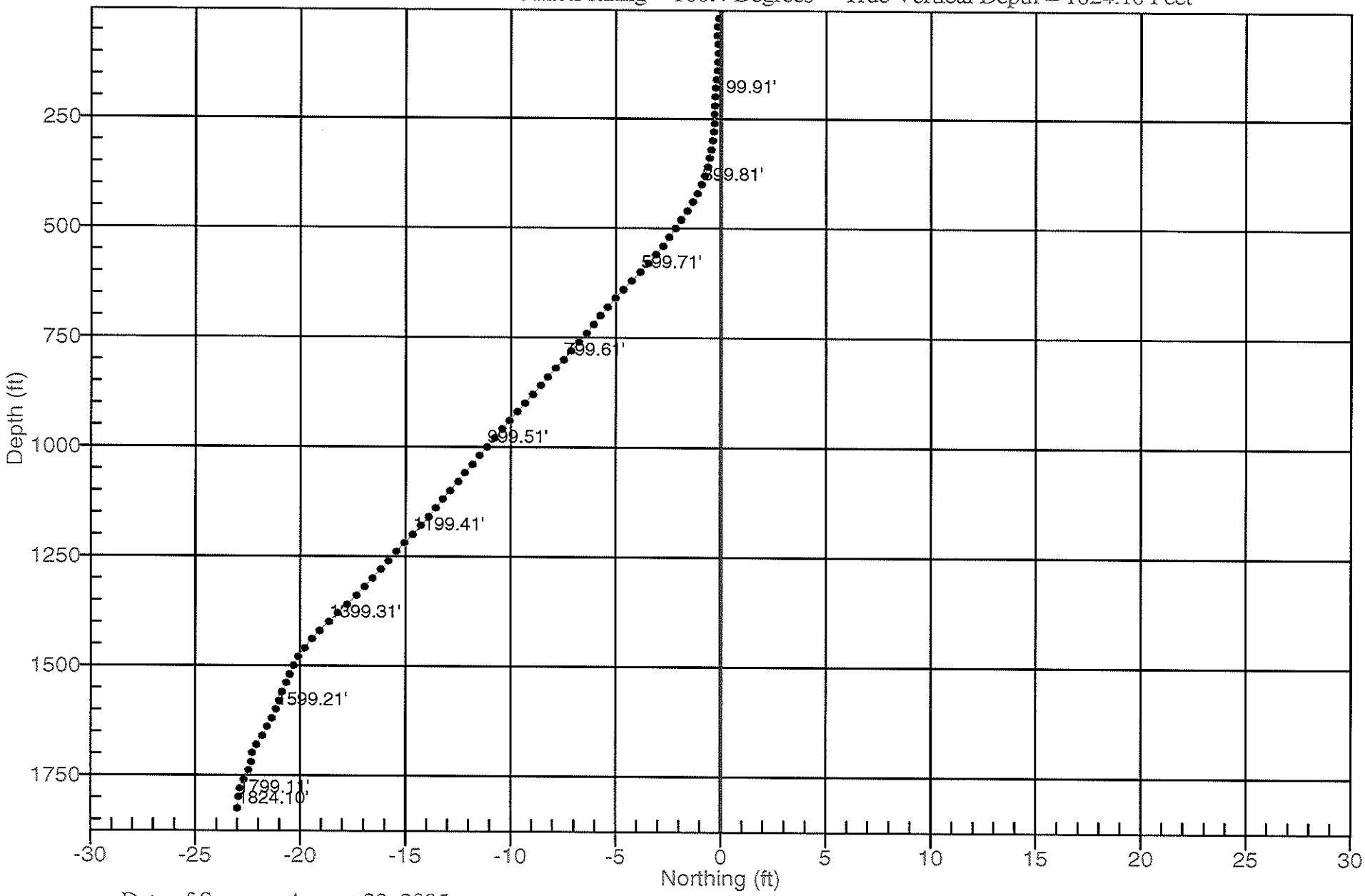
Welenco, Inc. (800) 445-9914

El Paso Natural Gas

Arizona State #1-11

Drift-Pac Northing Rectangular View

Drift Distance = 24.39 Feet Drift Bearing = 160.4 Degrees True Vertical Depth = 1824.10 Feet



Date of Survey: August 22, 2005

Balanced Tangential Calculation Method

Welenco, Inc. (800) 445-9914

Balanced Tangential Method

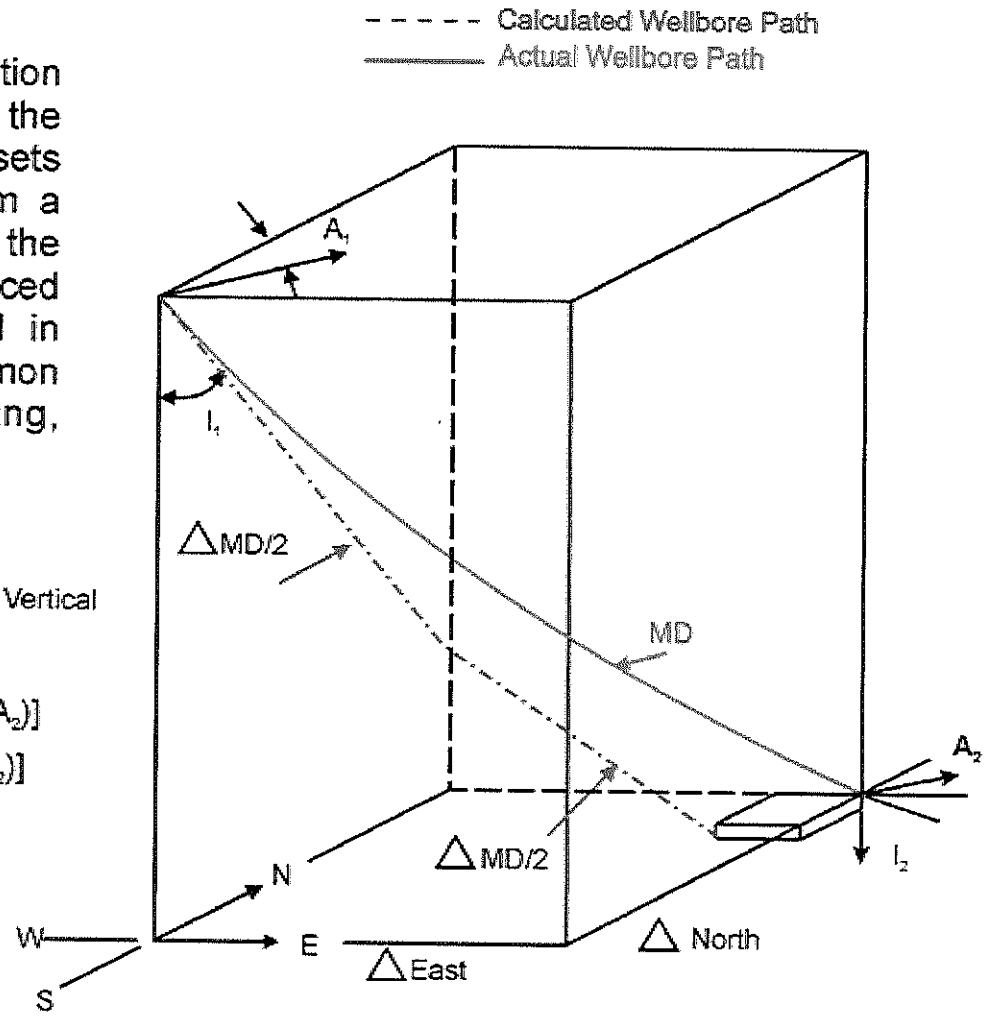
The Balanced Tangential Method uses the inclination and direction angles at the upper and lower ends of the course length in a manner so as to balance the two sets of measured angles over a course length. From a theoretical standpoint, this method combines the trigonometric functions to provide the average balanced inclination and direction angles, which are used in standard computational procedures. Other common names for this method are Vector Averaging, Acceleration, and Trapezoidal.

$\triangle$ Vertical

$$\triangle \text{North} = [\ \triangle MD/2] \times [\sin(I_1) \times \cos(A_1) + \sin(I_2) \times \cos(A_2)]$$

$$\triangle \text{East} = [\ \triangle MD/2] \times [\sin(I_1) \times \sin(A_1) + \sin(I_2) \times \sin(A_2)]$$

$$\triangle \text{Vertical} = [\ \triangle MD/2] \times [\cos(I_2) + \cos(I_1)]$$



Drill Time and Cuttings Log

Operator: El Paso Natural Gas Company
Well: Arizona State #1-11
Location: 1,980' FNL, 1,980' FEL
Section 11, T7S, R8E
Pinal County, Arizona

Ground Level Elevation = 1507'
Spud Date: August 14, 2005
Completion Date: September

925

Casing 9 5/8" K-55 36# set at 85' KB
Casing 7" K-55 set at 1,797' KB

Depth		Drill Rate Minutes/Ft										
Top	Bottom	10+	9	8	7	6	5	4	3	2	1	Cloride
1000	1010										X	
1010	1020									X		
1020	1030										X	
1030	1040									X		
1040	1050									X		
1050	1060									X		
1060	1070									X		
1070	1080										X	
1080	1090									X		
1090	1100									X		
1100	1110									X		
1110	1120										X	
1120	1130										X	
1130	1140									X		
1140	1150										X	
1150	1160									X		
1160	1170									X		
1170	1180									X		
1180	1190										X	
1190	1200									X		
1200	1210									X		
1210	1220									X		
1220	1230										X	
1230	1240									X		
1240	1250										X	
1250	1260										X	
1260	1270										X	
1270	1280										X	
1280	1290										X	
1290	1300									X		
1300	1310									X		
1310	1320									X		
1320	1330										X	
1330	1340									X		
1340	1350										X	
1350	1360									X		
1360	1370									X		
1370	1380									X		
1380	1390									X		
1390	1400									X		
1400	1410									X		
1410	1420								X			
1420	1430								X			
1430	1440								X			
1440	1450								X			
1450	1460									X		
1460	1470								X			
1470	1480								X			

Lithology
Brown claystone with minor pebble conglomerate
Brown claystone
Brown claystone
Brown claystone
Corse grained pebble conglomerate, quartz, igneous, & limestone
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with angular limestone pebbles
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone
Brown claystone
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor quartz and limestone pebbles
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor igneous sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor quartz and limestone sand
Brown claystone with minor quartz and limestone sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with minor subangular quartz sand
Brown claystone with angular anhydrite & quartz sand
Brown claystone with angular anhydrite & quartz sand
Brown claystone with angular anhydrite & quartz sand
Brown claystone with angular anhydrite & quartz sand
Brown claystone with angular anhydrite & quartz sand
Brown claystone and ignous conglomerate
Brown claystone and ignous conglomerate
Brown claystone and ignous conglomerate
Brown claystone with minor angular anhydrite
Brown claystone with minor angular anhydrite
Brown claystone with minor subangular igneous sand
Brown claystone with minor subangular igneous sand

1480	1490								X			Brown claystone with minor subangular igneous sand
1490	1500								X			Brown claystone with minor subangular quartz sand
1500	1510								X			400 Brown claystone with minor subangular quartz sand
1510	1520									X		Brown claystone with anhydrite shards
1520	1530									X		Brown claystone with anhydrite shards
1530	1540										X	Brown claystone with anhydrite shards
1540	1550									X		Brown claystone with anhydrite shards
1550	1560									X		Brown claystone with subangular quartz pebbles
1560	1570									X		Brown claystone with subangular quartz pebbles
1570	1580									X		Brown claystone with minor subangular quartz pebbles
1580	1590									X		800 Brown claystone with minor subangular quartz pebbles
1590	1600									X		Brown claystone with minor subangular quartz pebbles
1600	1610									X		Brown claystone with minor subangular quartz pebbles
1610	1620									X		Brown claystone with minor subangular quartz pebbles
1620	1630						X					Brown claystone with 20% quartz pebbles
1630	1640						X					1,000 Brown claystone with 20% quartz pebbles
1640	1650			X								Brown claystone with 20% quartz pebbles
1650	1660			X								Brown claystone with minor igneous sand
1660	1670				X							Brown claystone with minor igneous sand
1670	1680					X						1,000 Brown claystone with minor igneous sand
1680	1690							X				Brown claystone with minor quartz & igneous sand
1690	1700						X					Brown claystone with quartz sand and anyhdrite shards
1700	1710						X					1,100 Brown claystone with quartz sand and anyhdrite shards
1710	1720						X					Brown claystone with igneous and quartz conglomerate
1720	1730							X				Brown claystone with igneous and quartz conglomerate
1730	1740								X			900 Brown claystone with igneous and quartz conglomerate
1740	1750								X			Brown claystone with igneous and quartz sand conglomerate
1750	1760									X		Brown claystone with igneous and quartz sand conglomerate
1760	1770									X		Brown claystone with igneous and quartz sand conglomerate
1770	1780									X		Brown claystone with 40% subangular quartz sand
1780	1790									X		Brown claystone with 40% subangular quartz sand
1790	1800									X		900 Brown Siltstone with lime cement and minor quartz sand
1800	1810									X		Brown Siltstone with lime cement and minor quartz sand
1810	1820									X		Brown Siltstone with lime cement and minor quartz sand
1820	1830							X				1,500 White to buff limestone with mafic igneous pebbles
1830	1840							X				Light brown siltstone with lime cement
1840	1850						X					800 Light brown siltstone with lime cement and igneous pebbles
1850	1860						X					White to buff limestone with mafic igneous pebbles
1860	1870								X			Light brown siltstone with lime cement and quartz sand
1870	1880								X			Light brown siltstone with lime cement and quartz sand
1880	1890								X			Light brown siltstone with lime cement and quartz sand
1890	1900								X			Light brown siltstone with lime cement and buff limestone
1900	1910								X			900 Light brown siltstone with lime cement and quartz sand
1910	1920								X			Light brown siltstone with lime cement and quartz sand
1920	1930					X						Light brown siltstone with lime cement and quartz sand
1930	1940					X						Light brown siltstone with lime cement and quartz sand
1940	1950						X					Light brown siltstone with lime cement and white limestone
1950	1960								X			900 Igneous pebble conglomerate with light brown siltstone & quartz sand
1960	1970						X					Igneous pebble conglomerate with light brown lime cemented siltstone
1970	1980						X					Igneous pebble conglomerate with light brown siltstone & quartz sand
1980	1990					X						White to buff limestone light brown lime cemented brown siltstone
1990	2000					X						White and brown siltstone with lime cement
2000	2010					X						1,200 Igneous pebble conglomerate with light brown lime cemented siltstone
2010	2020					X						Igneous pebble conglomerate with light brown lime cemented siltstone
2020	2030					X						Igneous pebble conglomerate with light brown lime cemented siltstone
2030	2040					X						Igneous pebble conglomerate with light brown lime cemented siltstone
2040	2050					X						1,100 Igneous pebble conglomerate with light brown lime cemented siltstone
2050	2060					X						Igneous pebble conglomerate with light brown lime cemented siltstone
2060	2070						X					Igneous pebble conglomerate with light brown lime cemented siltstone
2070	2080						X					Igneous pebble conglomerate with light brown lime cemented siltstone
2080	2090							X				Light brown siltstone with lime cement and quartz sand
2090	2100							X				1,500 Igneous pebble conglomerate with light brown lime cemented siltstone
2100	2110						X					Igneous pebble conglomerate with light brown lime cemented siltstone

925

925

2110	2120						X					Buff limestone with light brown siltstone with lime cement
2120	2130					X						Buff limestone with minor granite & igneous pebbles
2130	2140					X						Light brown calcarious cemented siltstone and buff limestone
2140	2150					X						1,700 Granite & igneous pebbles with light brown calcarious siltstone
2150	2160					X						Light brown calcarious siltstone and buff limestone with granite pebbles
2160	2170								X			Light brown calcarious siltstone and buff limestone with granite pebbles
2170	2180									X		Light brown calcarious siltstone and buff limestone with granite pebbles
2180	2190									X		Light brown calcarious siltstone and buff limestone with granite pebbles
2190	2200									X		1,500 Light brown calcarious siltstone and buff limestone with granite pebbles
2200	2210											Light brown calcarous slitstone with bright white quartz slitstone
2210	2220									X		Light brown calcarous slitstone with bright white quartz slitstone
2220	2230									X		Light brown calcarous slitstone with bright white quartz slitstone
2230	2240									X		Light brown calcarious siltstone and buff limestone with granite pebbles
2240	2250								X			Light brown calcarious siltstone and buff limestone with granite pebbles
2250	2260									X		2,300 Light brown calcarious siltstone and buff limestone with granite pebbles
2260	2270									X		Light brown calcarious siltstone and buff limestone
2270	2280								X			Light brown calcarious siltstone and buff limestone with granite pebbles
2280	2290								X			Light brown calcarious siltstone and buff limestone
2290	2300									X		Light brown calcarious siltstone and buff limestone
2300	2310								X			2,500 Light brown calcarious siltstone and buff limestone with granite pebbles
2310	2320									X		Light brown calcarous slitstone with bright white quartz slitstone
2320	2330									X		Light brown calcarous slitstone with bright white quartz slitstone & granite pebbles
2330	2340									X		Light brown calcarous slitstone with bright white quartz slitstone
2340	2350									X		Light brown calcarous slitstone with bright white quartz slitstone
2350	2360									X		2,300 Buff limestone with light brown siltstone with calcite cement
2360	2370									X		Buff limestone with light brown siltstone with calcite cement
2370	2380									X		Light brown calcarous slitstone with white quartz sand
2380	2390									X		Buff limestone with light brown siltstone with calcite cement
2390	2400									X		Light brown calcarious siltstone and quartz pebbles
2400	2410									X		Buff limestone with light brown calccarious siltstone and granite pebbles
2410	2420								X			Brown calcarious siltstone and buff limestone
2420	2430								X			2,400 Brown calcarious siltstone and buff limestone
2430	2440								X			Buff limestone with light brown siltstone with calcite cement
2440	2450							X				Brown calcarious siltstone with white quartz siltstone
2450	2460							X				Buff limestone with light brown siltstone with calcite cement & granite pebbles
2460	2470								X			Brown calcarous slitstone with bright white quartz slitstone & granite pebbles
2470	2480								X			2,800 Buff limestone with light brown siltstone with calcite cement
2480	2490								X			Brown calcarious siltstone with white quartz siltstone
2490	2500								X			Brown calcarious siltstone with white quartz siltstone
2500	2510								X			Buff limestone with light brown siltstone with calcite cement
2510	2520								X			Buff limestone with light brown siltstone with calcite cement
2520	2530								X			2,700 Buff limestone with light brown siltstone with calcite cement
2530	2540								X			Buff limestone with light brown siltstone with calcite cement
2540	2550								X			Light brown calcarous slitstone with granite pebbles
2550	2560								X			Light brown calcarous slitstone with bright white quartz slitstone
2560	2570								X			Light brown calcarous slitstone with bright white quartz slitstone
2570	2580								X			2,900 Light brown calcarous slitstone with bright white quartz slitstone
2580	2590								X			Buff limestone with light gray calcarious shale
2590	2600											Buff limestone with light gray calcarious shale
2600	2610											Buff limestone with light brown siltstone with calcite cement
2610	2620									X		Buff limestone with light brown siltstone with calcite cement
2620	2630								X			11,000 Buff limestone with light brown siltstone with calcite cement
2630	2640									X		Buff limestone with light brown siltstone with calcite cement
2640	2650								X			23,000 Buff limestone with light brown siltstone with calcite cement & gray calc shale
2650	2660								X			Light brown calcarous slitstone with bright white quartz slitstone
2660	2670								X			36,000 Light brown calcarous slitstone with bright white quartz slitstone
2670	2680								X			Light brown calcarous slitstone and brown claystone & halite
2680	2690								X			50,000 Light brown calcarous slitstone and brown claystone & halite
2690	2700									X		Light brown calcarous slitstone and brown claystone & halite
2700	2710								X			190,000 Light brown calcarous slitstone and brown claystone with white quartz siltstone
2710	2720								X			Light brown calcarous slitstone and brown claystone with buff limestone & salt
2720	2730								X			Buff limestone with mafic pebbles & salt
2730	2740				X							Light brown calcarous slitstone and brown claystone with white quartz siltstone

2740	2750				X							Light brown calcarous slitstone and brown claystone with buff limestone & salt
2750	2760	X										Halite with brown claystone
2760	2770	X									200,000	Halite with brown claystone
2770	2780	X										Buff limestone with light brown calcite cemented siltstone
2780	2790	X										Light brown calcarous slitstone with white quartz siltstone & halite
2790	2800	X									230,000	Light brown calcarous slitstone with white quartz siltstone & halite
2800	2810	X										Light brown calcarous slitstone with white quartz siltstone & halite
2810	2820	X										Light brown calcarous slitstone with white quartz siltstone & halite
2820	2830	X										Light brown calcarous slitstone with white quartz siltstone & halite
2830	2840	X										Light brown calcarous slitstone with white quartz siltstone & halite
2840	2850	X									200,000	Light brown calcarous slitstone with white quartz siltstone & halite
2850	2860	X										Light brown calcarous slitstone with white quartz siltstone & halite
2860	2870	X									200,000	Light brown calcarous slitstone with white quartz siltstone & halite
2870	2880	X										Light brown calcarous slitstone with white quartz siltstone & halite
2880	2890	X										Light brown calcarous slitstone with white quartz siltstone & halite
2890	2900			X							250,000	Milky white anhydrite with light brown calc siltstone
2900	2910				X							Milky white anhydrite with light brown calc siltstone
2910	2920				X							Milky white anhydrite with light brown calc siltstone
2920	2930				X							Milky white anhydrite with light brown calc siltstone
2930	2940						X					Milky white anhydrite with light brown calc siltstone
2940	2950						X					Milky white anhydrite with light brown calc siltstone
2950	2960								X			Milky white anhydrite with light brown calc siltstone
2960	2970								X			Milky white anhydrite with light brown calc siltstone
2970	2980				X							Milky white anhydrite with light brown calc siltstone
2980	2990				X							Milky white anhydrite with light brown calc siltstone
2990	3000						X					Milky white quartz with light brown calc siltstone and clays
3000	3010						X					Milky white quartz with light brown calc siltstone and clays
3010	3020				X							Milky white quartz with light brown calc siltstone and clays
3020	3030					X						Milky white quartz with light brown calc siltstone and clays
3030	3040					X						Milky white quartz with light brown calc siltstone and clays
3040	3050					X						Milky white quartz with light brown calc siltstone and clays
3050	3060								X			Milky white quartz with light brown calc siltstone and clays
3060	3070							X				Milky white quartz with light brown calc siltstone and clays
3070	3080								X			Milky white quartz with light brown calc siltstone and clays
3080	3090								X			Milky white quartz with light brown calc siltstone and clays
3090	3100						X					Milky white quartz with light brown calc siltstone and clays
3100	3110						X					Milky white quartz with light brown calc siltstone and clays
3110	3120							X				Milky white quartz with light brown calc siltstone and clays
3120	3130							X				Milky white quartz with light brown calc siltstone and clays
3130	3140							X				Milky white quartz with light brown calc siltstone and clays
3140	3150							X				Milky white quartz with light brown calc siltstone and clays
3150	3160							X				Milky white quartz with light brown calc siltstone and clays
3160	3170							X				Milky white quartz with light brown calc siltstone and clays

925

El Paso Natural Gas 1-11 State (Permit 925), sw ne 11-7s-8e (Submitted by Greg Gettman)

8/11/05
Haul and grade road base on to road and well site to permit entry and set up of drilling equipment. Move in Stewart Brothers Drilling Co. Rig.

8/12/05
Haul and grade road base on to road and well site to permit entry and set up of drilling equipment. Move in Stewart Brothers Drilling Co. equipment.

8/13/05
Rig up Stewart Brother Drilling Failing 2500 Mineral Exploration Rig.

8/14/05
Drill 12 ¼" conductor hole to 87'. Set 85' 9 5/8" conductor casing with 22 sacks of cement. Waiting on cement.

8/15/05
Total Depth 167'. Made 80' in the last 24 hours. Wait on cement. Drill out 9 5/8" conductor casing shoe. Drill 8 3/4" surface hole to 167'. Encountered hole stability problems. Shut down to mix mud and wait on shaker screens for large grain conglomerate drill cuttings.

8/16/05
Total Depth 540'. Made 373' in the last 24 hours. Drilling on 8 3/4" surface hole. Mud weight 9.1 lbs./gal. Viscosity 41 sec./qt.

8/17/05
Total Depth 937'. Made 397' in the last 24 hours. Drilling on 8 3/4" surface hole. Short trip to clean and condition hole. Mud weight 8.8 lbs./gal. Viscosity 35 sec./qt.

8/18/05
Total Depth 1,354'. Made 417' in the last 24 hours. Drilling on 8 3/4" surface hole. Short trip at 1,040' to clean and condition hole. Mud weight 8.8 lbs./gal. Viscosity 40 sec./qt.

8/19/05
Total Depth 1,570'. Made 216' in the last 24 hours. Drilling on 8 3/4" surface hole. Mud weight 8.8 lbs./gal. Viscosity 38 sec./qt. Chlorides @ 400 ppm.

8/20/05
Total Depth 1,706'. Made 136' in the last 24 hours. Tripping for new bit. Work on mud pump. Mud weight 8.7 lbs./gal. Viscosity 44 sec./qt. Chlorides @ 1,200 ppm.

8/21/05
Total Depth 1,820'. Made 114' in the last 24 hours. Bit cones and jets badly balled up with gummy formation clays. Trip back in hole. Reached total depth on 8 ¾" surface hole at 2:00 AM 8/22/05. Circulate on bottom to clean hole. Tripping out of hole. Mud weight 9.2 lbs./gal. Viscosity 56 sec./qt. Chlorides @ 1,500 ppm.

8/22/05
Total Depth 1,820'. Trip out of hole. Lay down collars. Rig up Welenco Well Logging. Run, 4 Arm Caliper & Drift survey, Electric, Gamma, Temperature, & Dual Induction Logs. Logger TD 1,825.' Run 1,797' 7" J-55 23# casing. Circulate through casing. Waiting on Halliburton cementing crew from Farmington NM.

El Paso Natural Gas 1-11 State (Permit 925), sw ne 11-7s-8e (Submitted by Greg Gettman)

8/23/05
Circulate drilling mud through 7" Casing. Rig up Halliburton Farmington, NM cementing crew and equipment. Hold safety meeting. Displace drilling mud with 10 barrels water. Pump 180 sacks of PRB-II light cement with 2% calcium chloride and ¼#/ sack flocele followed by 130 sacks standard class cement with 2% calcium chloride and ¼#/sack flocele. Drop plug and displace with 69 barrels water. Circulated cement to the surface and displaced approximately 25 barrels cement to the pits. Witnessed by Steve Rauzi with Arizona Oil and Gas Conservation Commission. Wait on cement.

8/24/05
Wait on cement. Pressure test 7" casing to 1000 psig for 30 minutes. Held ok. Trip in hole with drill string and 6 1/4" bit. Drill out cement and 7" casing shoe. Shut down for rig repairs.

8/25/05
Total Depth 2,025'. Made 205' in gummy clays with 6¼" bit in last 24 hours. Mud Weight 8.8 lbs./gal. Viscosity 34 sec./qt. Chlorides 1,200 ppm.

8/26/05
Total Depth 2,126'. Made 101' in last 24 hours. Shut down 12 hours for rig repairs. Mud Weight 9.3 lbs./gal. Viscosity 44 sec./qt. Chlorides 1,500 ppm.

8/27/05
Total Depth 2,347'. Made 221' in last 24 hours. Trip for new bit. Mud Weight 9.0 lbs./gal. Viscosity 31 sec./qt. Chlorides 2,400 ppm.

8/28/05
Total Depth 2,704'. Made 357' in last 24 hours. Mud Weight 9.3 lbs./gal. Viscosity 34 sec./qt. Chlorides 2,900 ppm. @ 2,575'. Chlorides 11,000 ppm. @ 2,625'. Chlorides 23,000 ppm. @ 2,645'. Chlorides 36,000 ppm. @ 2,665'. Chlorides 50,000 ppm. @ 2,684'. Chlorides 54,000 ppm. @ 2,704'. Trip into surface pipe. Wait on trucks to change to salt saturated mud system.

8/29/05
Total Depth 2,704'. Changing to salt saturated drilling fluids system. Haul under-saturated drill fluids to Liquid Environmental Solutions of Arizona (a non-hazardous waste disposal facility). Perform rig repair and maintenance.

8/30/05
Total Depth 2,746'. Made 42' in the last 24 hours. Haul in brine from Amerigas Glendale. Mix brine based drilling fluids. Trip in hole and drill to 2,746'. Trip out of hole with 6 1/4" bit. Trip in hole with 6 ¼" core barrel. Mud Weight 9.9 lbs./gal. Viscosity 36 sec./qt. Chlorides 190,000 ppm.

8/31/05
Total Depth 2,790'. Made 44' in the last 24 hours. Trip in hole with 6 ¼" core barrel. Core from 2,746' to 2,766'. Trip out of hole with core barrel. Recovered 5' of core containing partially dissolved clear halite and bedded clays with partially dissolved salt crystal inclusions. Trip back in hole with 6 ¼" bit and drill to 2,790' Mud Weight 10.2 lbs./gal. Viscosity 32 sec./qt. Chlorides 230,000 ppm.

9/1/05
Total Depth 2,872'. Made 82' in the last 24 hours. Drilling hard brown claystone. Trip for a new bit because of poor penetration and metal shavings in drilling fluid returns. Mud Weight 10.2 lbs./gal. Viscosity 32 sec./qt. Chlorides 200,000 ppm.

El Paso Natural Gas 1-11 State (Permit 925), sw ne 11-7s-8e (Submitted by Greg Gettman)

9/2/05
Total Depth 3,022'. Made 150' in the last 24 hours. Drilling hard anhydrite. Trip for a new bit because of poor penetration rate. Mud Weight 10.7 lbs./gal. Viscosity 35 sec./qt. Chlorides 230,000 ppm.

9/3/05
Total Depth 3,170'. Made 148' in the last 24 hours. Called total depth at 11:00 PM. Short trip to clean and condition hole. Trip out of hole with 1,800' of pipe in the racks and laying down drill collars and remaining drill pipe. Rig up Schlumberger Farmington, NM.

9/4/05
Total Depth 3,170'. Rig up Schlumberger Farmington, NM. Logger total depth 3,163' KB. Run Platform Express High Resolution Lateralog, Gamma Ray, Triple Lithology Density, and Compensated Neutron Logs. Prep to Plug and Abandon. Run in hole with drill pipe to 1858'. Set 36 sack cement plug 1,858' to 1,740'. Fill hole with 9.5 lb/gal bentonite plugging grout while displacing brine drilling fluids mud from hole. Set 12 sack cement plug from surface to 60' below ground level to surface. Plugging witnessed by Steve Rauzi with the Arizona Oil and Gas Conservation Commission.

El Paso 1-11 State

Tank volume:		17.62992	17.62 gal./in.						
Hole volumes:									
1800-1860 @10":		244.86	5.83 bbl.						
1740-1800 @ 7":		119.9814	2.8567						
DP id 2.764									
Pump output .069 bbl/stk									
Pump & hose volume:		30gal.							
#1	10.25 in. water		24 sx cement						
			gal.	pump	total gal.	total bbl	total strokes		depth
	displacement:		561.19679	30	591.19679	14.076114	204.00165		1800
					0	0	0		
#2	5.25 in. water		12 sx cement		0	0	0		
	displacement		548.72575	30	578.72575	13.779185	199.69833		1760
					0	0	0		
#3	18 in. water		12 sx grout-well		0	0	0		
	displacement		486.37055	30	516.37055	12.294537	178.18169		1560
					0	0	0		
#4	18 in. water		12 sx grout-well		0	0	0		
	displacement		424.01535	30	454.01535	10.809889	156.66506		1360
					0	0	0		
#5	18 in. water		12 sx grout-well		0	0	0		
	displacement		361.66015	30	391.66015	9.3252417	135.14843		1160
					0	0	0		
#6	18 in. water		12 sx grout-well		0	0	0		
	displacement		299.30495	30	329.30495	7.8405941	113.6318		960
					0	0	0		
#7	18 in. water		12 sx grout-well		0	0	0		
	displacement		23.694976	30	53.694976	1.2784518	18.528287		760
					0	0	0		
#8	18 in. water		12 sx grout-well		0	0	0		
	displacement		174.59456	30	204.59456	4.871299	70.598536		560
					0	0	0		
#9	18 in. water		12 sx grout-well		0	0	0		
	displacement		112.23936	30	142.23936	3.3866514	49.081904		360
					0	0	0		
#10	18 in. water		12 sx grout-well		0	0	0		
	displacement		49.884159	30	79.884159	1.9020038	27.565272		160
					0	0	0		
#11	5.25 in. water		12 sx cement		0	0	0		
	displacement		1	30	31	0.7380952	10.697032		60
					0	0	0		

925

JOB SUMMARY

SALES ORDER NUMBER: 389641	TICKET DATE: 08/23/05		
REGION: NORTH AMERICA LAND	NWA / COUNTRY: RMNWA / USA	BDA / STATE: NM	COUNTY: PINAL / STATE: AZ
MBU ID / EMPL #: 121605	H.E.S. EMPLOYEE NAME: TOM COLLINS	PSL DEPARTMENT: CEMENT	
LOCATION: FARMINGTON, NM	COMPANY: EL PASO PRODUCTION	CUSTOMER REP / PHONE: GREG DETTMAN 719-351-4093	
TICKET AMOUNT:	WELL TYPE:	API/UWI #:	
WELL LOCATION:	DEPARTMENT: CMT	SAP BOMB NUMBER: 010	Description: CMT SURFACE
LEASE NAME: STATE	Well No.: 111	SEC / TWP / RNG:	H.E.S. FACILITY (CLOSEST TO WELL SITE): FARMINGTON, NM

H.E.S. EMP NAME / EMP # / (EXPOSURE HOURS)	HRS	HRS	HRS	HRS
121605 COLLINS				
125314 HARDESTY				
162183 BIZZELL				

H.E.S. UNIT #'S / (R / T MILES)	R / T MILES	R / T MILES	R / T MILES	R / T MILES
10702849				
10248037				
10205677-10025031				

Form. Name _____ Type: _____
Form. Thickness _____ From: _____ To _____
Packer Type _____ Set At _____
Bottom Hole Temp: _____ Pressure _____
Misc Data _____ Total Depth _____

	Called Out	On Location	Job Started	Job Completed
Date	08/23/05	08/23/05	08/23/05	08/23/05
Time	0600	1830	1943	2046

Tools and Accessories

Type and Size	Qty	Make
Float Collar		
Float Shoe		
Centralizers		
Top Plug		
Packer		
DV Tool		
Insert Float		
Guide Shoe		
Other		

Well Data

	New/Used	Weight	Size/Grade	From	To	Max. Allow
Casing	NEW	23.0	7	ZERO	1,796	
Casing						
Liner						
Tubing						
Drill Pipe						
Open Hole						SHOTS
Perforations						
Perforations						
Perforations						

Materials

Bactericide _____ Lb. _____
Disp. Fluid _____ Density _____
Prop. Type _____ Size _____
Prop. Type _____ Size _____ Lb _____
Prop. Type _____ Size _____ Lb _____
Buffer Type _____ Gal. _____ @ _____ /1000
Surfactant _____ Gal. _____ @ _____ /1000
Crosslinker _____ Gal. _____ @ _____ /1000
Gelling Agent _____ Gal. _____ @ _____ /1000
Friction Red. _____ Lbs. _____ @ _____ /1000
Foamer _____ Gal. _____ @ _____ /1000
Breaker _____ Lbs. _____ @ _____ /1000
Breaker _____ Lbs. _____ @ _____ /1000
Perfpac Balls _____ Qty _____
Sand Control _____ Gal. _____ @ _____ /1000
Nitrogen _____ SCF. _____
Other _____
Other _____
Other _____

Hours On Location

Date	Hours
Total	

Operating Hours

Date	Hours
Total	

Description of Job

Hydraulic Horsepower

Ordered _____ Avail. _____ Used _____

Average Rates in BPM

Treating _____ Disp. _____ Overall _____

Cement Left in Pipe

Feet _____ Reason _____

Cement Data

Stage	Sacks	Cement	Bulk/Sks	Additives	W/Rq.	Yield	Lbs/Gal
1	180	HALL. LITE	BULK	65/35/STD/POZ 2% CC .25# FLOCECE	10.03	1.89	12.40
1	130	STD.	BULK	2% CC .25# FLOCELE	5.01	1.17	15.8

925

Summary

Circulating: N/A Displacement: _____ Load & Bkdn: _____ Acid: _____
Breakdown: _____ Maximum: _____ Prepad: _____ Pad: _____
Average: _____ Frac. Gradient: _____ Treatment: _____ Disp.: _____
Treatment: _____ 5 Min. _____ 10 Min _____ Other: _____
ISIP: _____ 15 Min _____ 30 Min N/A Total Volume: _____

JOB LOG

TICKET # 3896472	TICKET DATE 08/23/05			
REGION NORTH AMERICA LAND	NWA / COUNTRY RMNWA / USA	BDA / STATE NM	COUNTY PINAL	STATE AZ
MBU ID / EMPL # 121605	H.E.S. EMPLOYEE NAME TOM COLLINS	PSL DEPARTMENT CEMENT		
LOCATION FARMINGTON, NM	COMPANY EL PASO PRODUCTION	CUSTOMER REP / PHONE GREG DETTMAN 719-351-4093		
TICKET AMOUNT	WELL TYPE	API/UWI #		
WELL LOCATION	DEPARTMENT CMT	JOB PURPOSE CODE CMT SURFACE		
LEASE / WELL # STATE	Well No. 111	SEC / TWP / RNG	H.E.S. FACILITY (CLOSEST TO WELL SITE) FARMINGTON, NM	

Chart No.	Time	Rate BPM	Volume GAL	Pmps T	Pmps C	Press.(PSI) Tbg	Press.(PSI) Csg	Job Description / Remarks
	1830							ON LOCATION 08/23/05
	1840							SAFETY MEETING
	1900							RIG UP
	1930							PRESSURE TEST
	1943	3.7	10				100	START WATER AHEAD
	1946	5.0	61				100	START LEAD CMT @ 12.4 LBS/GAL
	2009	3.3	27				100	START TAIL CMT @ 15.8 LBS/GAL
	2017							RELEASE PLUG
	2018	3.0						START DISPL.
								SLOW RATE DOWN, WAITING ON WATER
	2044		69				1,000	PLUG DOWN, SHUT DOWN
								RELEASE PSI AND CHECK FLOATS O.K.
								JOB COMPLETE
	2230							OFF LOCATION
								CIRCULATE 25BBLS. GOOD CMT.
								THANK YOU,

925

TOTAL LOAD:- 4.0 GAL. TOTAL PROPPANT:- LBS.

APPLICATION TO PLUG AND ABANDON

FIELD NA (719) 520-4533

OPERATOR El Paso Natural Gas Co ADDRESS & PHONE 2 N. Nevada, Colo Spgs CO 80944

LEASE NUMBER (Lessor's name if fee) Arizona State WELL NO. 1-11

LOCATION 1980' FNL + 1980' FEL
Sec 11, T-7S, R 8 E Pinal County AZ

TYPE OF WELL Stratigraphic Test TOTAL DEPTH TBD
(Oil, Gas, or Dry)

ALLOWABLE (If Assigned) NA

LAST PRODUCTION TEST OIL — (Bbls.) WATER — (Bbls.)
GAS — (MCF) DATE OF TEST —

PRODUCING HORIZON NA PRODUCING FROM — TO —

1. COMPLETE CASING RECORD:

9 5/8" Casing @ approximately 80'
7" Casing @ approximately 1800'

2. FULL DETAILS OF PROPOSED PLAN OF WORK:

1. Contact Steve Rauzi at least 48 hours prior to starting abandonment operations.
2. Set a 120' cement plug across at the base of the surface casing (at approximately 1800'). Such plug shall extend at least 50' below to 50 feet above the casing shoe.
3. Circulate the salt saturated drilling mud from above the top of the cement plug at approximately 1750' with plugging mud. Plugging mud shall containing a minimum of 15 pounds per barrel of sodium bentonite and a nonfermenting polymer having a minimum consistency of 9 pounds per gallon and a minimum viscosiry of 50 seconds per quart mixed with fresh water.
4. Set a 50 foot cement plug from the to 1 foot below ground level to 51feet below ground level.
5. Cut off surface casing 1 foot below ground level.
6. Weld a metal plate on pipe inscribed with; El Paso Natural Gas Co., Arizona State #1-11, 1,980'FNL, 1,980' FEL, Section 11, T7S, R8E, Pinal County, Arizona

DATE COMMENCING OPERATIONS To be determined

NAME OF PERSON DOING WORK Stewart Brothers Drilling ADDRESS 306 Airport Road Milan, New Mexico

Doug W Sattman
Signature

Manager, Facility Planning
Title

2 North Nevada, Colorado Springs, CO 80944
Address

8-11-05
Date

Mail two copies of completed form to:
Oil and Gas Program Administrator
Arizona Geological Survey
416 W. Congress #100
Tucson, AZ 85701

Date Approved 8-15-05
STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
By S C Rauzi

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Application to Plug and Abandon
File Two copies
Form No. 9

Permit No. 925

2/96

PERMIT TO DRILL

This constitutes the permission and authority from the

OIL AND GAS CONSERVATION COMMISSION,
STATE OF ARIZONA,

To: EL PASO NATURAL GAS COMPANY
(OPERATOR)

to drill a well to be known as

1-11 STATE
(WELL NAME)

located 1980' FNL & 1980' FEL

Section 11 Township 7S Range 8E, PINAL County, Arizona.

The N/A STRAT TEST of said Section, Township and Range is dedicated to this well.

Said well is to be drilled substantially as outlined in the attached Application and must be drilled in full compliance with all applicable laws, statutes, rules and regulations of the State of Arizona.

Issued this 11 day of April 2005, 19__.

OIL AND GAS CONSERVATION COMMISSION

By S L Rauzi
EXECUTIVE DIRECTOR
OIL & GAS ADMINISTRATOR

PERMIT 00325

RECEIPT NO. #3131

A.P.I. NO. 02-021-2006

State of Arizona
Oil & Gas Conservation Commission
Permit to Drill
FORM NO. 27

APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL ☒ RE-ENTER OLD WELL ☐

NAME OF COMPANY OR OPERATOR

El Paso Natural Gas Company

Address	City	State	Phone Number
2 North Nevada Ave	Colorado Springs	CO 80903	719.520.4533

Drilling Contractor: to be determined

Address:

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or if fee lease, name of lessor	Well number	Elevation (ground)
Arizona Application to obtain Mineral Resources #08-108702	1-11	1507'

Nearest distance from proposed location to property or lease line:	Distance from proposed location to nearset drilling, completed or applied-for well on the same lease:
1980' feet	none feet

Number of acres in lease	Number of wells on lease, including this well, completed in or drilling to this reservoir:
320 E ½ Sec 11	none

If lease purchased with one or more wells drilled, from whom purchased. Name: Address:

Well location (give footage from section lines)	Section - Township - Range or Block and Survey	Dedication per A.A.C. R12-7-104(A)(3)
1980' FNL and 1980' FEL	Sec. 11, T7S, R8E, G. & S.R.M.	N/A

Field and reservoir (if wildcat, so state)	County
Stratigraphic Test	Pinal

Distance in miles and direction from nearest town or post office: 8 miles northeast of Eloy Arizona

Proposed depth:	Rotary or cable tools	Approximate date work will start
4500'	Rotary	May 2005

Bond status / Amount	Organization Report	Filing Fee of $25.00
filed 03/02/05 / $25,000	On file Or attached X	Attached X

Remarks

Stratigraphic test per Arizona Administrative Code, Title 12, Chapter 7, R12-7-128

API # 02-021-20006

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the: Manager, Facility Planning of the El Paso Natural Gas (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Signature

March 18, 2005
Date

Mail completed form to:
Oil and Gas Program Administrator
Arizona Geological Survey
416 W. Congress, #100
Tucson, AZ 85701-1315

Permit Number: 925
Approval Date: 4-11-2005
Approved By: SC Rancy

NOTICE: Before sending in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided.

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

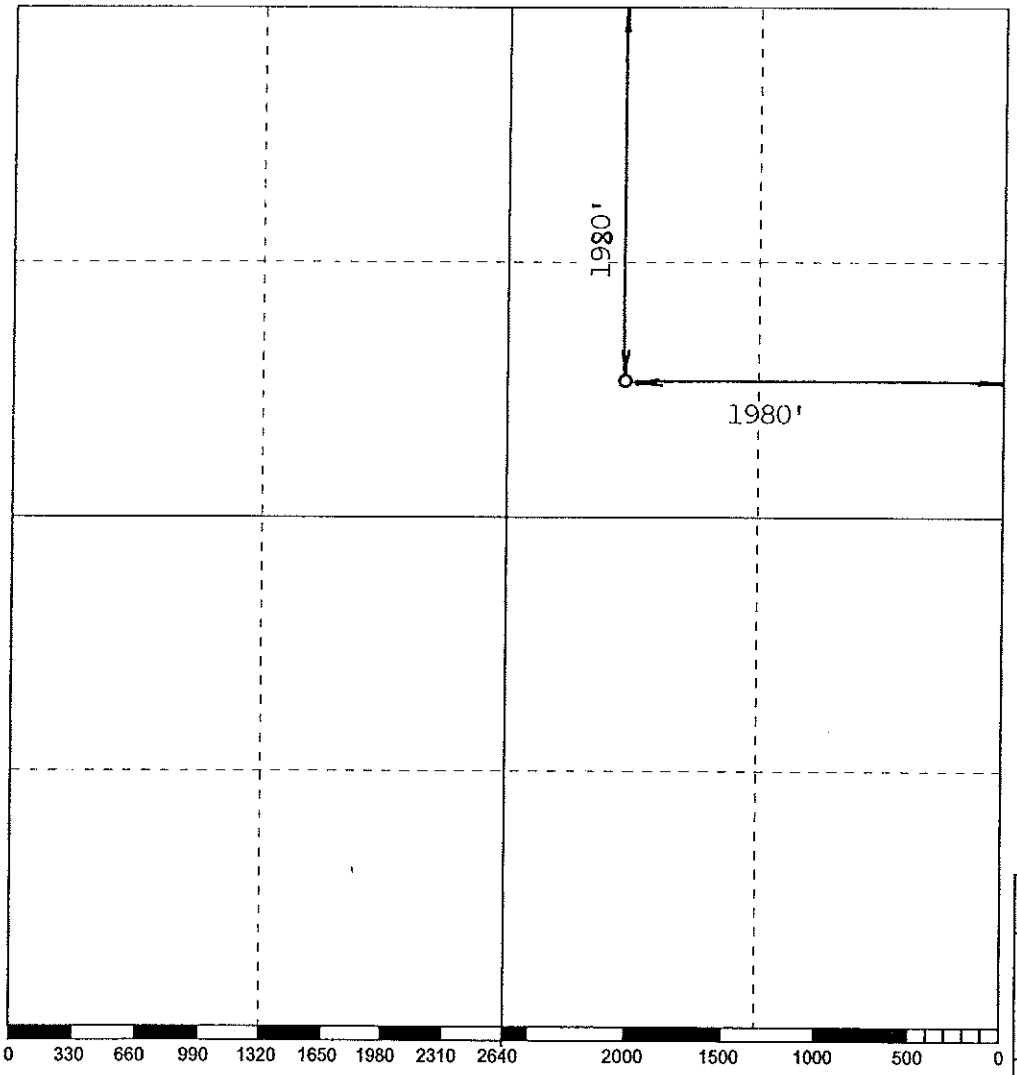
Application to Drill or Re-enter
File Two Copies

Form No. 3

(Complete Reverse Side) 5/96

1. Operator shall outline on the plat the ai ge dedicated to the well in compliance with A.A 12-7-107.
2. A registered surveyor shall show on the plat the location of the well and certify this information in the space provided.
3. ALL DISTANCES SHOWN ON THE PLAT MUST BE FROM THE OUTER BOUNDARIES OF THE SECTION.
4. Is the operator the only owner in the dedicated acreage outlined on the plat below ? YES ____ NO X
5. If the answer to question four is no, have the interests of all owners been consolidated by communitization agreement or otherwise? YES X NO ____ If answer is yes, give type of consolidation Arizona State Lands East ½ Sec
6. If the answer to question four is no, list all the owners and their respective interests below:

Owner	Land Description
State of Arizona	



CERTIFICATION

I hereby certify that the information abov is true and complete to the best of my knowledge and belief.

Name: Greg Gettman

Position: Manager, Facility Planning

Company: El Paso Natural Gas

Date: 03/18/2005

I hereby certify that the well location shown on the plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

GARY G. EIDSON
Date Signed 3/15/05
ARIZONA U.S.A.

Date Surveyed: March 2, 2005

Registered Land Surveyor

Certificate No. 29871

PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement	Type
9 5/8"	36#	K-55	0	70'	70'	19	Class"A"
7"	23#	J/K-55	0	1800'	1800'	230	Class"A"

EL PASO NATURAL GAS COMPANY
STATE #1-11 STRATIGRAPHIC TEST
DRILLING PROGRAM

925

1. Prepare the location
2. Move in and rig up drilling rig.
3. Review El Paso's safety policy and procedures and ensure all contractors have been through safety orientation.
4. Conduct safety meeting at all tour start ups.
5. Drill 12-1/4" conductor hole to approx. 60 ft. – 80 ft. ground level (GL). Run 9-5/8" conductor casing and cement to surface. Construct 6' x 6' x 6'cellar.
6. Nipple up (NU) flow line from conductor pipe to rig tanks.
7. Fill rig tanks with water. Make up (MU) spud mud.
8. Pick up (PU) 8-3/4" bit and run in the hole (RIH) to approx. 60 – 80 ft GL.
9. Drill 8-3/4" hole to approx. 1840 ft. GL, surveying approx. every 150 feet. Monitor the chloride content of the drilling fluid returns. Stop drilling at the earlier of; 1) the chloride levels in the drilling fluid exceed 30,000 mg/l or 2) upon reaching a depth of 2,000 feet.
10. Conduct a short trip and circulate the well clean. Circulate and condition mud for logging.
11. Pull out of hole (POOH) laying down the bottom hole assembly (BHA).
12. Rig up (RU) logging company, and log well per attached logging program.
13. RIH and circulate and condition mud to run casing. POOH
14. RU casing crews. Run approx. 45 joints of 7", 23.0 lb/ft, LT&C surface casing to approx. 1800 ft GL. Float shoe and float collar will be bucked onto first joint of 7" casing. Fill each joint of casing with drilling fluid as it is being run in. The centralizers will be placed as per the attached casing program.
15. MU 7" LT&C cementing head and circulate well till cementing units are rigged up. Circulate the well with the rig pumps until the cementing units are rigged up.
16. RU cementing company. Pressures test all cementing lines. Cement the 7" surface casing to surface per the cementing program.

    Note: From information gathered during the drilling of the surface hole, it may become necessary to run a cementing diverter tool and cement in two stages.

    Note: Notify Stephen Rauzi (520-770-3500) with the Arizona Geological Survey (Oil and Gas Administrator) 48 hours prior to cementing.
17. Wait on cement (WOC) approx. 24 hours. After 6 hours of WOC, test the float equipment. Remove the cementing head. Top off cement in the 7" x 8-3/4" annulus if necessary. After 18 hours of WOC, remove the flow line and cut off the 9-5/8" conductor pipe. Cut (at a pre-determined elevation) and lay down the 7" surface casing.
18. PU 6-1/4" bit and RIH to the float collar at approx. 1760 ft. GL. Drill out the float collar from the 7" surface casing with 6-1/4" Drill bit.
19. Pressure test the 7" casing (4360-psi Internal Yield Resistance) to 1800-psi – 1 psi/ft gradient (assuming 9.0 lb/gal mud, 1800' casing shoe (850-psi hydrostatic head) gives 2650-psi bottom hole test pressure - Does not exceed 70% of 4360 (3050-psi)) and hold for 30 minutes. Use a chart recorder to record the test results. There shall not be more than a 10% drop in pressure. If so, then test must be repeated.

PB Energy Storage Services, Inc.

20. Clean surface tanks and fill with salt saturated mud.
21. Rig up mud logger.
22. Drill out cement, float shoe, wellbore cement and drill approx. 10 feet of new formation. Circulate and condition the drilling fluid.
23. Drill 6-1/4" hole, running a deviation survey (TOTCO) every 500 feet. The deviation shall be kept at a minimum and should be controlled using the BHA (stabilizer/reamer placement) and operating parameters (weight on bit (WOB) and rotary speed). Mud logger to take samples every 10 ft.
24. At first evidence of salt cuttings in the returns or as directed by El Paso site supervisor, stop drilling. Circulate hole clean. POOH with rotary bit.
25. PU 6 1/4" x 4" core bit and barrel and run into to hole to bottom.
26. Begin coring, pulling core after 30 feet. Continue coring until directed by El Paso Site Supervisor.
27. POOH with core assembly. PU 6 1/4" bit and Rih to bottom to resume drilling.
28. Drill approximately 100 feet. Mud logger to continue to take samples every 10 feet.
29. Thirty foot core samples will be taken after approximately every hundred feet of drilling until the salt body has been penetrated. The El Paso Site Supervisor may alter the core intervals depending upon samples obtained.
30. Continue to drill a 6-1/4" hole to a total depth of approx. 5000 ft., running a deviation survey (TOTCO) every 500 feet. The deviation shall be kept at a minimum (less than 100 ft from surface to TD) and should be controlled using the BHA (stabilizer/reamer placement) and operating parameters (weight on bit (WOB) and rotary speed). Mud logger to take samples every 10 ft.
31. Conduct a short trip and circulate and condition mud for logging.
32. POOH, laying down the BHA.
33. Rig up & run open-hole logs per logging program.
34. RIH and circulate out the salt saturated drilling fluid. POOH.
35. Conduct the Plug and Abandonment (P&A) program.

    Note: Notify Stephen Rauzi (520-770-3500) with the Arizona Geological Survey (Oil and Gas Administrator) 48 hours prior to conducting the P&A program.

36. Lay down the drill pipe.
37. Rig down and move out the drilling rig

MUD PROGRAM

1. Spud / Freshwater Mud: Depth 0 ft. to approx 1,800 ft.

Mud Weight	8.8 – 9.2 lbs/gal
Viscosity	35 – 45 sec/qt.
Filtrate Control	< 25 cc
pH	< 9
% Solids	< 10%

Freshwater mud will consist mainly of freshwater mix with bentonite drilling clay. The mud weight and % solids can be controlled by application of good surface solids control equipment (i.e. shale shakers, desander, desilter and/or mud cleaner). The viscosity will be regulated with water, bentonite and sodium bicarbonate (soda ash). A polyanionic cellulose additive (DRISPAC) will be used to control the filtrate loss of the filter cake.

2. Saltwater Mud: Depth approx. 1,800 ft. to 4,500 ft.

Mud Weight	10.0 – 10.4 lbs/gal
Viscosity	35 – 45 sec/qt.
Filtrate Control	< 25 cc
pH	< 9
% Solids	< 10%

Saltwater mud will consist mainly of make-up brine mixed with attapulgite clay. The mud weight and % solids can be controlled by application of good surface solids control equipment (i.e. shale shakers, desander, desilter and/or mud cleaner). The viscosity will be regulated with water saturated with salt and attapulgite. A pregelatinized starch additive (IMPERMEX)will be used to control the filtrate loss of the filter cake.

To counter any potential drilling problems such as abnormal formation pressures and lost circulation, a supply of barite and loss circulation materials (LCM) will be kept on site.

The drilling fluid properties will be checked and recorded periodically during each 12 hour tower (shift). A drilling fluids engineer from a third party (Baker Inteq, Bariod, etc) will set up each of the drilling mud (freshwater and saltwater) systems and check the drilling fluid properties daily. The mud engineer will also be used as needed to deal with any problems encountered during drilling.

LOGGING PROGRAM

1. Surface Hole: Surface to Approx. 1,800 ft.

   Electric Line Logging: Dual Induction Resistivity Log w/SP
   Gamma Ray

   Mud Logging: None

2. Interval of Interest: 1,800 ft to Approx. 4,500 ft.

   Electric Line Logging: Dual Laterolog Resistivity Log (Saltwater Mud)
   Gamma Ray
   Compensated Neutron (Porosity Logging)
   Litho Density (Bulk Density Logging)
   Combined Caliper Log
   Dipole Sonic Log

   Mud Logging: 10 ft Samples from 1,800 ft to 5,000 ft.

CASING PROGRAM

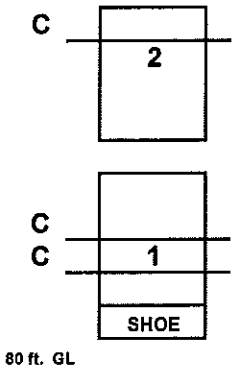
1. Conductor Casing:

   12-1/4" Borehole
   Surface to Approx. 80 ft.
   9-5/8" - 0.352" Wall, 36.0 lb/ft, J/K-55, PE

2. Surface Casing:

   8-3/4" Borehole
   Surface to Approx. 1,800 ft.
   7" - 0.317" Wall, 20 lb/ft, J/K-55, LT&C

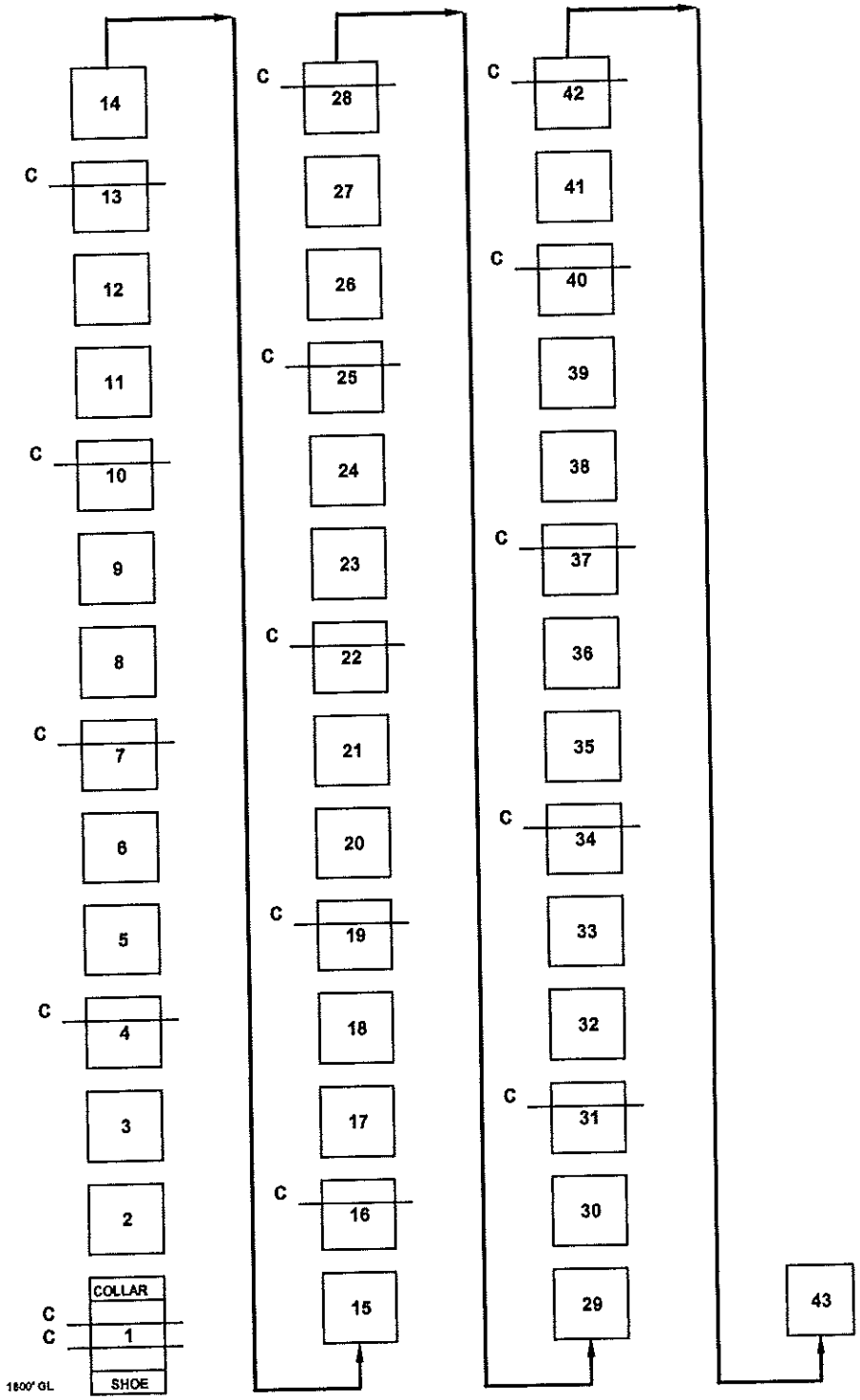
Picacho Storage Project
Strat Well
9-5/8" Conductor Casing & Cementing Hardware Program



C - 12-1/4" x 9-5/8" Bow Type Centralizers

PB Energy Storage Services, Inc.
ENGINEERING · CONSTRUCTION · OPERATIONS · MAINTENANCE
A Parsons Brinckerhoff Company

El Paso Natural Gas Company
Picacho Storage Project
Strat Well
7" Casing & Cementing Hardware Program



C - 8-3/4" x 7" Bow Type Centralizers

PB Energy Storage Services, Inc.
ENGINEERING · CONSTRUCTION · OPERATIONS · MAINTENANCE
A Parsons Brinckerhoff Company

CEMENTING PROGRAM

1. Conductor Casing:

12-1/4" x 9-5/8" Borehole - Surface to Approx. 80 ft.
$(12.25^2 - 9.625^2) \times \pi/4 \times 1/144 = 0.3132$ ft^3/ft
80 ft x 0.3132 ft^3/ft = 25 ft^3
Excess: 50% of Open Hole Volume

35 sacks Standard/Class A Cement + 0.25 lbs/sack Cello Flake + 2% Calcium Chloride

Slurry Weight (lb/gal)	15.80
Slurry Yield (ft^3/sack)	1.17
Amount of Mix Water (gal/sk)	5.00
Estimated Pumping Time	3:00
COMPRESSIVE STRENGTH 24 hrs @ 80 ° F (psi)	4000

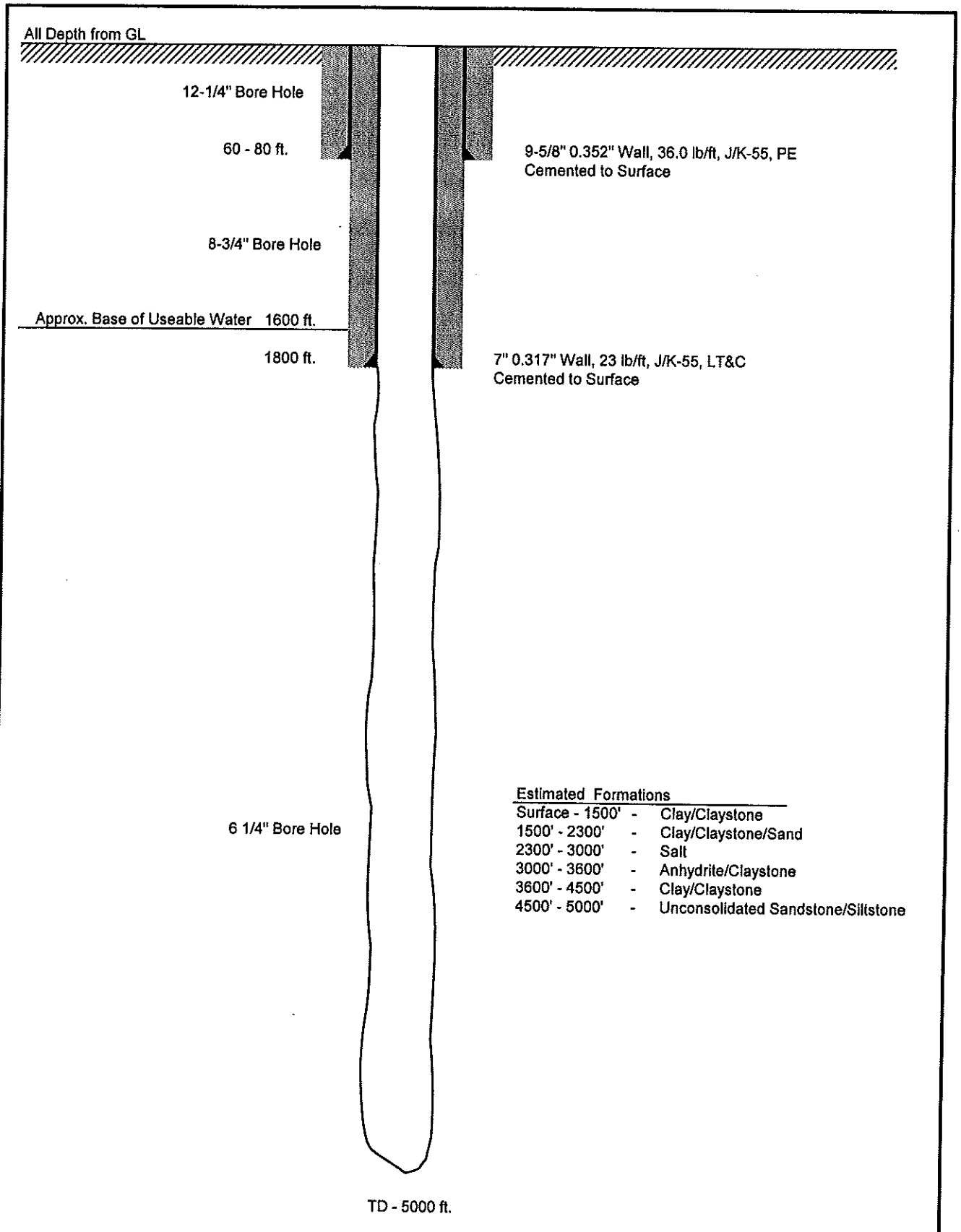
2. Surface Casing:

8-3/4" x 7" Borehole - Surface to Approx. 1,800 ft.
$(8.921^2 - 7^2) \times \pi/4 \times 1/144 = 0.1668$ ft^3/ft
80 ft x 0.1668 ft^3/ft = 13.3 ft^3
$(8.75^2 - 7^2) \times \pi/4 \times 1/144 = 0.1503$ ft^3/ft
1220 ft x 0.1503 ft^3/ft = 183.4 ft^3
500 ft x 0.1503 ft^3/ft = 75.2 ft^3
Excess: 100% of Open Hole Volume or 25% over caliper

Lead Slurry: 180 sacks Standard Lite Cement + 0.25 lbs/sack Cello Flake + 2% Calcium Chloride

Tail Slurry: 130 sacks Standard/Class A Cement + 0.25 lbs/sack Cello Flake + 2% Calcium Chloride

	Lead Slurry	Tail Slurry
Slurry Weight (lb/gal)	12.00	15.80
Slurry Yield (ft^3/sack)	2.12	1.17
Amount of Mix Water (gal/sk)	12.11	5.00
Estimated Pumping Time	5:00	3:00
COMPRESSIVE STRENGTH 24 hrs @ 80 ° F (psi)	340	4000

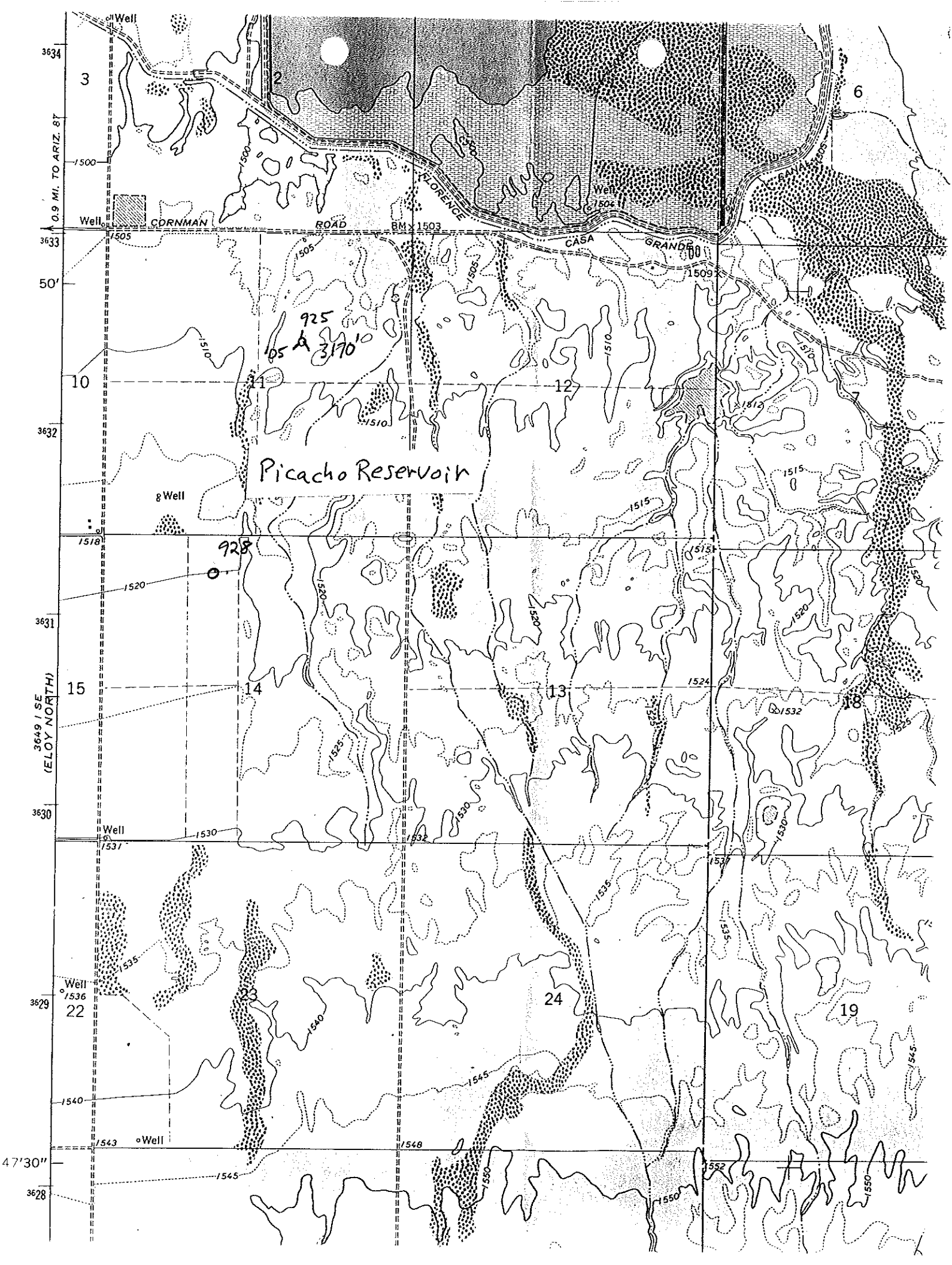


PB - ENERGY STORAGE SERVICES, INC.

EL PASO NATURAL GAS COMPANY

PICACHO BASIN SLIM HOLE STRAT. WELL - ELOY, AZ.

DRAWN: KB	CHECKED: KB	DATE: 3-30-05	SCALE: NONE	JOB NO. 50579A


Picacho Reservoir
925
105 A 3170'
928
0.9 MI. TO ARIZ. 87
CORNMAN ROAD
BM x 1503
FLORENCE
CASA GRANDE
RAILROAD
Well
3649 I SE (ELOY NORTH)
47'30"

EL PASO NATURAL GAS COMPANY
P.O. BOX 4430
HOUSTON, TX 77210-4430

REMITTANCE ADVICE

CHECK DATE	03/09/2005
CHECK NUMBER	07512907
VENDOR NUM	F000004071

ARIZONA OIL & GAS
.
CONSERVATION COMMISSION
416 WEST CONTRESS SUITE 100
TUCSON, AZ 85701

RETAIN FOR YOUR RECORDS

Refer Payment Inquires to EPGTR - 713-420-4200

Voucher ID	Invoice Number	Invoice Date	Discount	Paid Amount
00224204	CKREQ050303	03/03/2005	0.00	50.00
	STATE #1-11 & #1-20 PERMITS			

RECEIPT Date 3-21-2005 No. 3131

Received From EL Paso Natural Gas Company

Address PO Box 4436, Houston TX 77210

fifty and no/100 Dollars $50.00

For filing fee permit 925 and Permit 926

ACCOUNT			HOW PAID		
AMT. OF ACCOUNT			CASH		
AMT. PAID			CHECK	50	00
BALANCE DUE			MONEY ORDER		

By SC Ramirez

8K806 Rediform

$50.00

EL PASO NATURAL GAS COMPANY
P.O. BOX 4430
HOUSTON, TX 77210-4430

CITIBANK DELAWARE
A Subsidiary of Citicorp
One Penn's Way
New Castle, DE 19720

62-20
311

CHECK DATE 03/09/2005

CHECK NUMBER 07512907

Amount ***$50.00

VOID AFTER ONE YEAR

Pay ***FIFTY AND XX / 100 US DOLLAR***

To The Order Of ARIZONA OIL & GAS
.
CONSERVATION COMMISSION
416 WEST CONTRESS SUITE 100
TUCSON, AZ 85701

DH SCH

Authorized Signature

VOID VOID VOID VOID VOID VOID VOID

⑈07512907⑈ ⑆031100209⑆ 3869160⑈

ORGANIZATION REPORT

Full Name of the Company, Organization, or Individual

El Paso Natural Gas Company

Mailing Address and Phone Number

PO Box 1087 Colorado Springs CO 80944-1087 (719)473.2300

Plan of Organization (State whether organization is a corporation joint stock association, firm or partnership, or individual

Corporation

Purpose of Organization (State type of business in which engaged)

Natural Gas Transmission

If a reorganiztion, give name and address of previous organization

If a foreign corporation give (1) State where incorporated	(2) Name and mailing address of state agent	(3) Date of permit to do business in state
Delaware	CT Corporation System 3225 N. Central Avenue Phoenix AZ 85012	(AZ) May 22, 1936

Principal Officers or Partners (if partnership) NAME	TITLE	MAILING ADDRESS
James J. Cleary	President	P O Box 1087 Co Springs CO 80944 1087
William H. Healy, Jr.	Vice President	P O Box 1087 Co Springs CO 80944-1087
Thomas P. Morgan	Vice President	P O Box 1087 Co Springs CO 80944-1087
Catherine E. Palazzari	Vice President	P O Box 1087 Co Springs CO 80944-1087
Donald J. Zinko	Vice President	P O Box 1087 Co Springs CO 80944-1087

DIRECTORS NAME	MAILING ADDRESS
James J. Cleary	P O Box 1087 Co Springs CO 80944-1087
Greg G. Gruber	1001 Louisiana St Houston TX 77002
John W. Somerhalder II	1001 Louisiana St Houston TX 77002

CERTIFICATE I, the undersigned, under the penalty of perjury state that I am the Corporate Secretary of the El Paso Natural Gas Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Stacy E. James

Signature

2-16-05

Date

STATE OF ARIZONA

OIL & GAS CONSERVATION COMMISSION

Organization Report

File One Copy

Form No. 1

Mail completed form to
Oil and Gas Program Administrator
Arizona Geological Survey
416 W Congress., #100
Tucson, AZ 85701

2/96

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS

Bond Serial No. 23-007-048

That we: El Paso Natural Gas Company

of the County of El Paso in the State of Colorado

as principal, and Liberty Mutual Insurance Company

of 175 Berkeley Street, Boston, MA 02117

AUTHORIZED TO DO BUSINESS WITHIN THE STATE OF ARIZONA

as surety, are held and firmly bound unto the State of Arizona and the Oil and Gas Conservation Commission, hereinafter referred to as the "Commission", in the penal sum of Twenty Five Thousand and 00/100 Dollars, ($25,000.00) lawful money of the United States, for which payment, well and truly to be made, we bind ourselves, and each of us, and each of our heirs, executors, administrators or successors, and assigns jointly and severally, firmly by these presents.

The conditions of this obligation are that, whereas the above bounden principal proposes to drill a well or wells for oil, gas or stratigraphic purposes in and upon the following described land situated within the State, to-wit:

Sections 11 + 20 T7S, R8E Pinal County, Arizona

(May be used as blanket bond or for single well)

NOW THEREFORE, if the above bounden principal shall comply with all the provisions of the Laws of this State and the rules, regulations and orders of the Commission, especially with reference to the requirements of A.R.S. § 27-516, providing for the proper drilling, casing and plugging of said well or wells, and filing with the Oil and Gas Conservation Commission all notices and records required by said Commission, then in the event said well or wells do not produce oil or gas in commercial quantites, or cease to produce oil or gas in commercial quantites, this obligation is void; otherwise it shall remain in full force and effect.

Whenever the principal shall be, and declared by the Oil and Gas Conservation Commission in violation of the Laws of this State and the rules, regulations and orders of the Commission, the surety shall promptly:

1. Remedy the violation by its own efforts, or
2. Obtain a bid or bids for submission to the Commission to remedy the violation, and upon determination by the Commission and the surety of the lowest responsible bidder, arrange for a contract between such bidder and the Commission, and make available as work progresses sufficient funds to pay the cost of remedying the violation; but not exceeding, including other costs and damages for which the surety may be liable hereunder, the amount set forth in the first paragraph hereof.

Liability under this bond may not be terminated without written permission of this Commission.

WITNESS our hands and seals, this 2 day of March, 20 05.

El Paso Natural Gas Company

Greg G. Gruber Senior Vice President

Principal

WITNESS our hands and seals, this 1st day of March, 20 05.

Liberty Mutual Insurance Company

Suzanne Holden

Suzanne Holden, Attorney-In-Surety Fact

Countersignature Not Required

(Surety, Resident Arizona Agent
If issued in a state other than Arizona)

(If the principal is a corporation, the bond should be executed by its duly authorized officers, with the seal of the corporation affixed. When principal or surety executes this bond by agent, power of attorney or other evidence of authority must accompany the bond.)

Approved 3-21-2005
Date

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

By: SL Rains

Permit No. 925 + 926

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Bond
File Two Copies
Form No. 2

Bond No. 23-007-048

NOTICE FROM SURETY REQUIRED BY TERRORISM RISK INSURANCE ACT OF 2002

In accordance with the Terrorism Risk Insurance Act of 2002 (referred to hereinafter as the "Act"), this disclosure notice is provided for surety bonds on which one or more of the following companies is the issuing surety: Liberty Mutual Insurance Company; Liberty Mutual Fire Insurance Company; LM Insurance Corporation; The First Liberty Insurance Corporation; Liberty Insurance Corporation; Employers Insurance Company of Wausau (formerly "EMPLOYERS INSURANCE OF WAUSAU A Mutual Company"); Peerless Insurance Company; and any other company that is a part of or added to the Liberty Mutual Group for which surety business is underwritten by Liberty Bond Services (referred to collectively hereinafter as the "Issuing Sureties").

NOTICE FORMS PART OF BOND

This notice forms part of surety bonds issued by any one or more of the Issuing Sureties.

DISCLOSURE OF PREMIUM

The premium attributable to any bond coverage for "acts of terrorism" as defined in Section 102(1) of the Act is Zero Dollars ($0.00).

DISCLOSURE OF FEDERAL PARTICIPATION IN PAYMENT OF TERRORISM LOSSES

The United States will reimburse the Issuing Sureties for ninety percent (90%) of any covered losses from terrorist acts certified under the Act exceeding the applicable surety deductible.

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND. 1651310

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

LIBERTY MUTUAL INSURANCE COMPANY
BOSTON, MASSACHUSETTS
POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS: That Liberty Mutual Insurance Company (the "Company"), a Massachusetts stock insurance company, pursuant to and by authority of the By-law and Authorization hereinafter set forth, does hereby name, constitute and appoint

PATRICK D. DINEEN, HEIDI BOCKUS, THOMAS J. JOCHUMS, KATHIE L. WIEGERS, SUZANNE HOLDEN, THERESA A. LAMB, KRISTA M. LEE, ALL OF THE CITY OF SEATTLE, STATE OF WASHINGTON

, each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations in the penal sum not exceeding **SEVENTY-FIVE MILLION AND 00/100********** DOLLARS ($ **75,000,000.00*****) each, and the execution of such undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents, shall be as binding upon the Company as if they had been duly signed by the president and attested by the secretary of the Company in their own proper persons.

That this power is made and executed pursuant to and by authority of the following By-law and Authorization:

ARTICLE XIII - Execution of Contracts: Section 5. Surety Bonds and Undertakings.
Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

By the following instrument the chairman or the president has authorized the officer or other official named therein to appoint attorneys-in-fact:

Pursuant to Article XIII, Section 5 of the By-Laws, Garnet W. Elliott, Assistant Secretary of Liberty Mutual Insurance Company, is hereby authorized to appoint such attorneys-in-fact as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

That the By-law and the Authorization set forth above are true copies thereof and are now in full force and effect.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Company and the corporate seal of Liberty Mutual Insurance Company has been affixed thereto in Plymouth Meeting, Pennsylvania this 16th day of December, 2004.

LIBERTY MUTUAL INSURANCE COMPANY

By _____
Garnet W. Elliott, Assistant Secretary

COMMONWEALTH OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 16th day of December, 2004, before me, a Notary Public, personally came Garnet W. Elliott, to me known, and acknowledged that he is an Assistant Secretary of Liberty Mutual Insurance Company; that he knows the seal of said corporation; and that he executed the above Power of Attorney and affixed the corporate seal of Liberty Mutual Insurance Company thereto with the authority and at the direction of said corporation.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.

TERESA PASTELLA COMMONWEALTH OF PENNSYLVANIA NOTARY PUBLIC

Notarial Seal
Teresa Pastella, Notary Public
Plymouth Twp., Montgomery County
My Commission Expires Mar. 28, 2005
Member, Pennsylvania Association of Notaries

By _____
Teresa Pastella, Notary Public

CERTIFICATE

I, the undersigned, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy, is in full force and effect on the date of this certificate; and I do further certify that the officer or official who executed the said power of attorney is an Assistant Secretary specially authorized by the chairman or the president to appoint attorneys-in-fact as provided in Article XIII, Section 5 of the By-laws of Liberty Mutual Insurance Company.

This certificate and the above power of attorney may be signed by facsimile or mechanically reproduced signatures under and by authority of the following vote of the board of directors of Liberty Mutual Insurance Company at a meeting duly called and held on the 12th day of March, 1980.

VOTED that the facsimile or mechanically reproduced signature of any assistant secretary of the company, wherever appearing upon a certified copy of any power of attorney issued by the company in connection with surety bonds, shall be valid and binding upon the company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the said company, this 1st day of March, 2005.

By _____
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

All-Purpose
Certificate of Acknowledgment

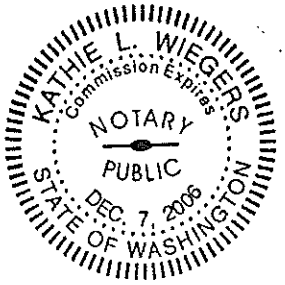
State of **Washington**
County of **King** }

On **March 1, 2005** (DATE) before me, **Kathie L. Wiegers** (NAME OF NOTARY PUBLIC),

personally appeared **Suzanne Holden** (NAME(S) OF SIGNER(S))

☑ personally known to me - **OR**

☐ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Witness my hand and official seal.

Kathie L. Wiegers
SIGNATURE OF NOTARY PUBLIC

Though the data below is not required by law, it may prove valuable to persons relying on the document and prevent fraudulent reattachment of this form.

CAPACITY CLAIMED BY SIGNER

- ☐ Individual(s)
- ☐ Corporate Officer:
- ☐ Title(s) _____
- ☐ Partner(s)
- ☑ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Subscribing Witness
- ☐ Guardian/Conservator
- ☐ Other: _____

DESCRIPTION OF ATTACHED DOCUMENT(S)

Type of Document
Performance Bond

Number of Pages
Two (2)

Date of Document
March 1, 2005

Signer(s) Other Than Named Above
El Paso Natural Gas Company

SIGNER IS REPRESENTING:
NAME OF PERSON(S) OR ENTITY(IES)
Liberty Mutual Insurance Company

EL PASO NATURAL GAS

Operator: El Paso Natural Gas Company

Bond Company: Liberty Mutual Insurance

Bond No.: 23-007-048

Amount: $25,000.00

Date of Bond: 3/2/2005

Date approved: 3/21/2005

Permits covered by this bond:

925 Plugged 9/5/05
926 Plugged 8/6/05
928 Expired, not drilled
933 TA 10/16/06

elpaso Natural Gas

August 30, 2006

925

Mr. Steven Rauzi
State of Arizona
Oil & Gas Conservation Commission
416 West Congress
Suite 100
Tucson, AZ 85701

Re: El Paso Natural Gas Company
State #1-11 & State #1-20
Sections 11 & 20, T7S, R8E
Pinal County, AZ
AZOGCC Permits #925 & #926

Dear: Mr. Rauzi:

Pursuant to the Arizona Administrative Code R12-7-121-C El Paso Natural Gas Company requests that the well completion information from the captioned wells be keep confidential for an additional two years (three years total). As you are aware El Paso Natural Gas Company is working toward the development of a salt cavern gas storage facility in Section 20, T7S, R8E, Pinal County AZ. The disclosure of this information could harm our competitive position with relation to the development of the facility and the possible need to purchase additional acreage.

Please let me know if you have any questions or concerns.

Sincerely Yours,

Greg Gettman
Manager, Facility Planning
El Paso Natural Gas Company
Office 719-520-4533
Cell 719-351-4093

El Paso Natural Gas
PO Box 1087 Colorado Springs, Colorado 80944
tel 719.473.2300 fax 719.520.4318

Subject: Re: Picacho Reservoir well
From: Steve Rauzi <steve.rauzi@azgs.az.gov>
Date: Tue, 16 May 2006 08:57:17 -0700
To: Tom Shaw <thshaw@msn.com>

925

Yes, El Paso permitted the 1-21 hole in 21-7s-8e in March. El Paso has not yet started drilling. I've attached a copy of this permit, number 933. Steve

Tom Shaw wrote:

> Last question, have any other permits been issued for deep tests in the Eloy area? If so, can I get a copy(s)?
>
> ---
>
> **From:** Steve Rauzi [mailto:steve.rauzi@azgs.az.gov]
> **Sent:** Tuesday, May 16, 2006 10:08 AM
> **To:** Tom Shaw
> **Subject:** Re: Picacho Reservoir well
>
> Tom, Here is the approved permit 926 for the El Paso 1-20 well. El Paso finished drilling the 1-20 in August 2005. By the way, I need to correct an error in my previous email: El Paso finished drilling the 1-11 well in September 2005 not 2006. Steve
>
> Tom Shaw wrote:
> Thanks. Can I also get a copy of the permit for the well they drilled on State lands over behind the prison?
>
> T-
>
> ---
>
> **From:** Steve Rauzi [mailto:steve.rauzi@azgs.az.gov]
> **Sent:** Monday, May 15, 2006 5:35 PM
> **To:** Tom Shaw
> **Subject:** Re: Picacho Reservoir well
>
> Hi Tom, Here's the approved permit 925 for the El Paso 1-11 well south of the Picacho Reservoir. El Paso finished drilled the 1-11 in September 2006 and the completion report will be confidential for one year from that date in accordance with R12-7-121(C). Steve
>
> Tom Shaw wrote:
> Steve,
>
> Can I get scanned copies of the well permit and completion report for the well drilled by El Paso just south of the Picacho reservoir? I believe it was Sec. 10, or 12, on State lands.
>
> Tom
>
> --
> No virus found in this outgoing message.
> Checked by AVG Free Edition.
> Version: 7.1.392 / Virus Database: 268.5.6/339 - Release Date: 5/14/2006

Subject: Re: Picacho Reservoir well
From: Steve Rauzi <steve.rauzi@azgs.az.gov>
Date: Tue, 16 May 2006 08:32:23 -0700
To: Tom Shaw <thshaw@msn.com>

925

Yes

Tom Shaw wrote:

> Ok.
>
> Just to be sure I'm clear, the 1-20 data is confidential until August 2006 and the 1-11 will be confidential until September 2006?
>
> ---
>
> **From:** Steve Rauzi [mailto:steve.rauzi@azgs.az.gov]
> **Sent:** Tuesday, May 16, 2006 10:08 AM
> **To:** Tom Shaw
> **Subject:** Re: Picacho Reservoir well
>
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>
> T-
>
> ---
>
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> **Subject:** Re: Picacho Reservoir well
>
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> Tom Shaw wrote:
> Steve,
>
> Can I get scanned copies of the well permit and completion report for the well drilled by El Paso just south of the Picacho reservoir? I believe it was Sec. 10, or 12, on State lands.
>
> Tom
>
> --
> No virus found in this outgoing message.
> Checked by AVG Free Edition.
> Version: 7.1.392 / Virus Database: 268.5.6/339 - Release Date: 5/14/2006

Subject: Receipt of Welenco logs
From: Steve Rauzi <Steve.Rauzi@azgs.az.gov>
Date: Tue, 04 Oct 2005 10:43:36 -0700
To: "Gettman, Greg W" <Greg.Gettman@ElPaso.com>

925

Greg,

This will acknowledge receipt of the Welenco logs and drift survey and the rest of the data listed in your letter of September 26, 2005.

Thank you for the informative IGC report.

Here is a link to the latest El Paso story in the Arizona daily Star:
http://www.dailystar.com/dailystar/allheadlines/95839.php

Steve

elpaso Natural Gas

September 26, 2005

Mr. Steven Rauzi
Oil and Gas Administrator
Arizona Geological Survey
416 West Congress, Suite 100
Tucson, AZ 85701

925

Re: El Paso Natural Gas Company
State #1-11
AOGCC Permit #925

Dear Steve:

Attached for your records are the Well Completion Report and Well Log (Form 4) and the Plugging Record (Form 10) for the State #1-11. Also attached for pursuant to AAC R12-7-121 is the following information:

1 Drill Time and Cuttings Log
6 Boxes of Drill Cuttings from 1000' to 3,170'

The following well logs for this well were previously provided in the field:

1 Set of Welenco Geophysical Logs (90' to 1,825') consisting of:
- Dual Induction Gamma Ray
- Electric, Gamma, Temperature
- 4-Arm Caliper
- Drift Survey

1 Set of Schlumberger Geophysical Logs (1,795'to 3,163') consisting of:
- Triple Lithology Density & Compensated Neutron
- High Resolution Laterallog

El Paso Natural Gas Company requests in that this information be keep confidential as provided in Arizona Administrative Code R12-7-121 Subsection C. Please let me know if you have any questions or require additional information.

Sincerely,

Greg W Gettman

Greg Gettman
Manager, Facility Planning

El Paso Natural Gas
PO Box 1087 Colorado Springs, Colorado 80944
tel 719.473.2300 fax 719.520.4318

Subject: Re: Salt and drilling info
From: Tom.Zuppan@cityofmesa.org
Date: Wed, 31 Aug 2005 10:24:00 -0700
To: Steve Rauzi <steve.rauzi@azgs.az.gov>

925

Thank you. Both documents came through. I'll be in touch if I have any additional questions.

Tom F. Zuppan
Environmental Specialist
City of Mesa
Environmental Programs
480.644.6970 - Phone
480.694.6929 - Cell
480.644.4774 - Fax
tzuppan@cityofmesa.org

Salt and drilling info

Subject: Salt and drilling info
From: Steve Rauzi <Steve.Rauzi@azgs.az.gov>
Date: Wed, 31 Aug 2005 10:20:55 -0700
To: Tom.Zuppan@cityofmesa.org

Tom: I have attached the two issues of Arizona Geology that we talked about, Steve

<AZhassalt.pdf>
<Wanttodrill.pdf>

8-31-05 Tom called with questions about permitting, strat tests and injection wells. ADWR or OGCC? EPA + ADEQ involvement etc. Role of FERC.

Subject: Re: El Paso Eloy Stratigraphic Test Wells Update
From: Steve Rauzi <Steve.Rauzi@azgs.az.gov>
Date: Thu, 26 May 2005 09:25:42 -0700
To: "Gettman, Greg W" <Greg.Gettman@ElPaso.com>

925

Greg, Thanks for the update. You will need to file an amended application for permit to drill and plat per R12-7-105 (rules attached). The permit and API numbers will stay the same. Steve

Gettman, Greg W wrote:

> Mike, Gary & Steve,
>
> This e-mail is to update Arizona State Lands and the Oil and Gas Conservation Commission on the status of the El Paso Natural Gas Company State #1-11 and State #1-20 stratigraphic test wells. We have completed dirt work for the construction the drill site for the State #1-20. Due to saturated soils from nearby irrigated fields we moved the Section #1-20 drilling location and approximately 100' to the west and 20' to the north, the drill site remains with in the 400' by 400' work area laid out in in our State Lands Plan of Operation. As soon as I get the revised site surveyed I will be filing an amended location plat with Arizona Oil and Gas Commission and State Lands with the #1-20 well located 1,420 FEL, 1,300 FNL Section 20, T7S, R8E. We plan to start dirt work on the road and drill site today for the State #1-11 today.
>
> Unfortunately, Stewart Brothers has pushed back our start date for drilling to late June, due to third parties not releasing their drilling equipment. As soon as I have a spud date for the first well, I will provide the necessary notifications. Please let me know if you have any questions or concerns.
>
> Greg Gettman
> Manager, Facility Planning
> El Paso Corporation
> Western Pipelines
> Office (719) 520-4533
> Fax (719) 520-3792
> Cell (719) 351-4093
> greg.gettman@elpaso.com

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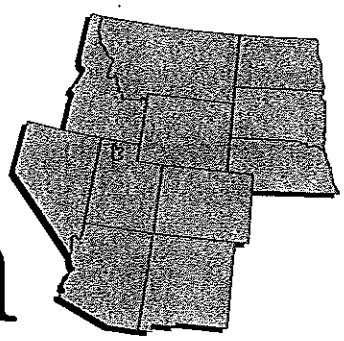

April 19, 2005 Volume 78 Number 75

(925)

Wyoming Edition

EPNG planning stratigraphic tests southeast of Phoenix Arizona

El Paso Natural Gas Co (EPNG) has plans to drill two 4500-ft stratigraphic tests in southern Arizona near the town of Eloy southeast of Phoenix.

Both of the Pinal County ventures—the 1-20 State, c ne 20-7s-8e, and—three and a half miles to the northeast—1-11 State, sw ne 11-7s-8e—are designed to evaluate the potential for gas storage in the area of the company's interstate pipelines.

In 2003, EPNG purchased Copper Eagle Gas Storage LLC, which was developing a gas storage project near Luke Air Force Base west of Phoenix (RMRR 8-27-03). The company notes that the Luke salt deposit near Phoenix extends nearly 10,000 ft deep. EPNG's plans call for up to three underground storage caverns for a maximum storage capacity of 9.6 billion cu ft of gas.

A little more than two miles southeast of the 1-20 State, Unocal Picacho Peak Gas Storage LLC earlier this year scheduled a 5000-ft stratigraphic test at the 1-27 City of Mesa in se sw 27-7s-8e (RMRR 1-11-05). The latter project also is designed to evaluate gas storage potential.

Paleozoics test slated for Colorado's Fort Collins field

Wellington Operating Co, Englewood, Colorado, has applied for a drilling permit for a 6250-ft test of the Permian Lyons about a mile north of Fort Collins in northeastern Colorado's Fort Collins field.

Designated the 1 Kixx, se nw 19-8n-68w, eastern Larimer County, the venture will be drilled in an area of Muddy and J sand production above 4600 ft in the field. The nearest Lyons producer is three quarters of a mile to the east-southeast, on the field's eastern flank. That well, the 13-20 Peterson in nw sw 20-8n-68w, was completed in 1979 by Crystal Exploration &

(Continued on following page)

Janet Napolitano
Governor

State of Arizona
Arizona Geological Survey
416 W. Congress, Suite 100
Tucson, Arizona 85701
(520) 770-3500
www.azgs.az.gov

Larry D. Fellows
Director and State Geologist

April 11, 2005

Mr. Greg Gettman
Manager Facility Planning
El Paso Natural Gas Company
2 North Nevada Ave
Colorado Springs CO 80903

Re: El Paso #1-11 State, Sec. 11-7s-8e, Pinal Co., Permit 925
El Paso #1-20 State, Sec. 20-7s-8e, Pinal Co., Permit 926

Dear Mr. Gettman:

I have enclosed a copy of approved blanket performance bond 23-007-048, approved applications to drill #925 & #926, permits to drill #925 & #926, and filing-fee receipt 3131.

The referenced applications are approved on the condition that El Paso Natural Gas Company conduct its operations in compliance with all applicable statutes and rules of the State of Arizona and that El Paso Natural Gas Company or its designated representative *notify me at least 48 hours* before you:

- Move in drilling equipment and commence operations, and
- Run and cement surface casing

An operator shall post a sign at the well site pursuant to A.A.C. R12-7-106 and submit drilling samples and all other well data and information pursuant to A.A.C. R12-7-121. Several Sundry Notice forms are enclosed for your use in reporting all pertinent drilling and testing activity to the Oil and Gas Conservation Commission of the State of Arizona. Daily drilling reports shall detail the spud date and daily progress (depth) and status of the well and shall be submitted to the Commission at the letterhead address on a weekly basis through the completion of operations. Thank you.

Sincerely,

Steven L. Rauzi
Oil & Gas Administrator

Enclosures

c J. Dale Nations, Chairman, Oil and Gas Conservation Commission
Larry D. Fellows, Director and State Geologist

elpaso Natural Gas

April 7, 2005

Mr. Steven Rauzi
Oil and Gas Program Administrator
Arizona Geological Survey
416 W. Congress #100
Tucson, AZ 85701-1315

925

Dear Mr. Rauzi:

Attached for your review and approval are two copies of the drilling prognoses for the proposed El Paso Natural Gas Company State #1-11 and #1-20 stratigraphic tests in Pinal County, Arizona. If you have any questions or problems with the attached materials, please give me a call at (719) 520-4533.

Sincerely,

Greg Gettman

Manager, Facility Planning
El Paso Natural Gas Company

El Paso Natural Gas
PO Box 1087 Colorado Springs, Colorado 80944
tel 719.473.2300 fax 719.520.4318

elpaso Natural Gas

March 18, 2005

Mr. Steven Rauzi
Oil and Gas Program Administrator
Arizona Geological Survey
416 W. Congress #100
Tucson, AZ 85701-1315

Dear Mr. Rauzi:

El Paso Natural Gas Company is requesting authority to drill two stratigraphic tests on Arizona State Lands in Pinal County, Arizona under Mineral Exploration Permits in May and June of this year. Attached for your review and approval are:

1. Application for Permit to Drill or Re-Enter in duplicate for the proposed State 1-11.

2. Application for Permit to Drill or Re-Enter in duplicate for the proposed State 1-~~11~~.20

3. A check for $50.00 to cover the filing fee for both applications.

4. An Organization Report for El Paso Natural Gas Company.

5. A $25,000 Blanket Performance Bond.

If you have any questions or problems with the attached materials, please give me a call at (719) 520-5433 to discuss. Thanks for your consideration of this proposed work.
45

Sincerely,

Greg W. Gettman

Greg Gettman

Manager, Facility Planning
El Paso Natural Gas Company

El Paso Natural Gas
PO Box 1087 Colorado Springs, Colorado 80944
tel 719.473.2300 fax 719.520.4318